
This is a reproduction of a library book that was digitized by Google as part of an ongoing effort to preserve the information in books and make it universally accessible.

Google™ books

<https://books.google.com>



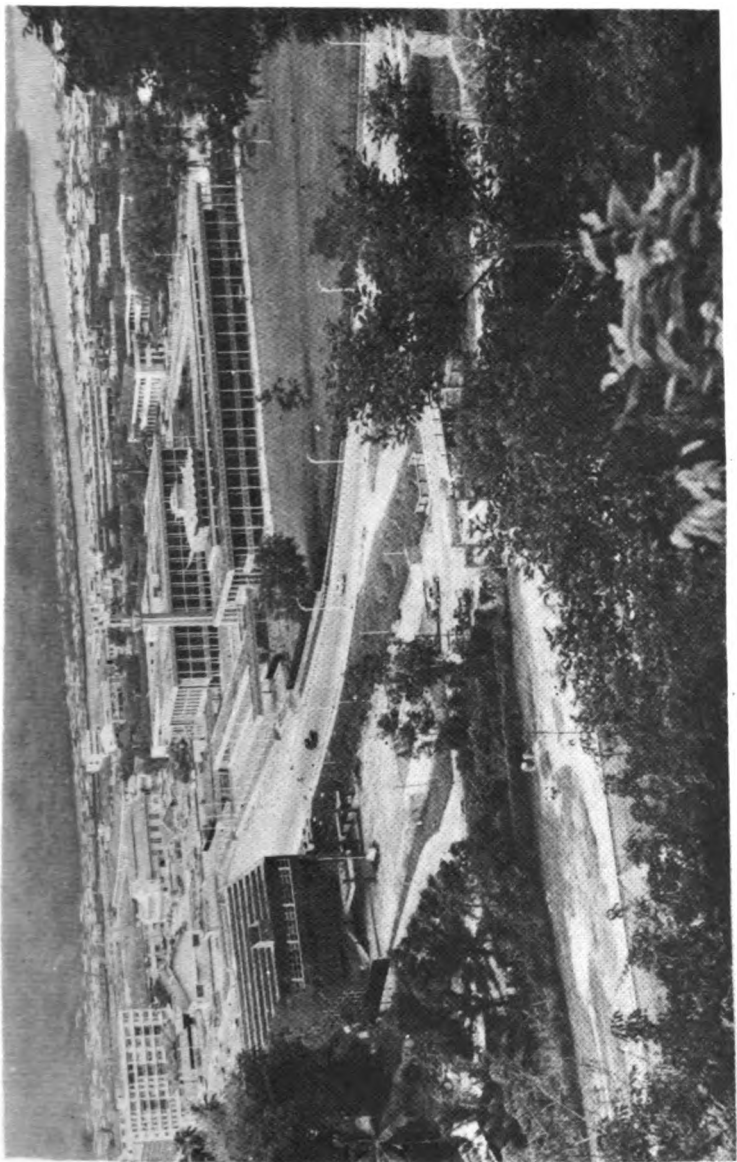
B 1,418,454



STATE OF BRUNEI
ANNUAL REPORT
1972



DS
646.35
.A3
1972



An Aerial view of Bandar Seri Begawan with the Laspau and Dewan Majlis in the centre and Kampong Aver in the background.

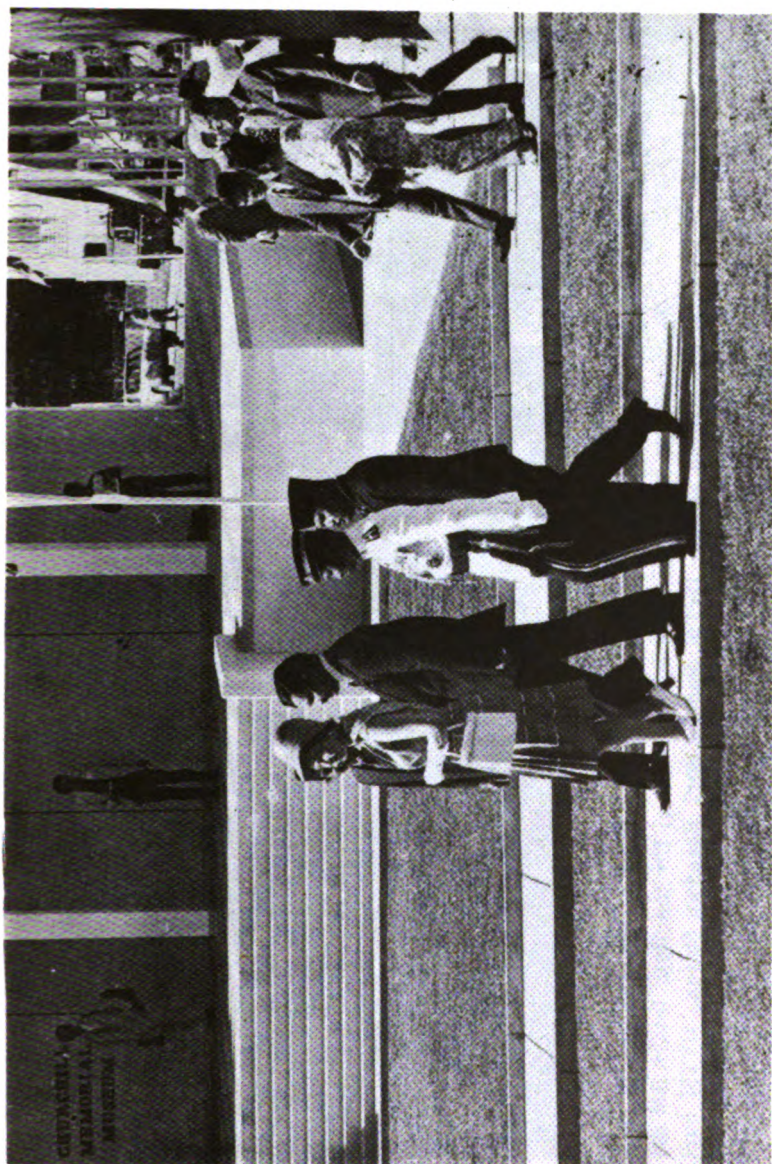
**HER MAJESTY QUEEN ELIZABETH
THE SECOND'S OFFICIAL VISIT TO
BRUNEI ON 29th. FEBRUARY, 1972.**



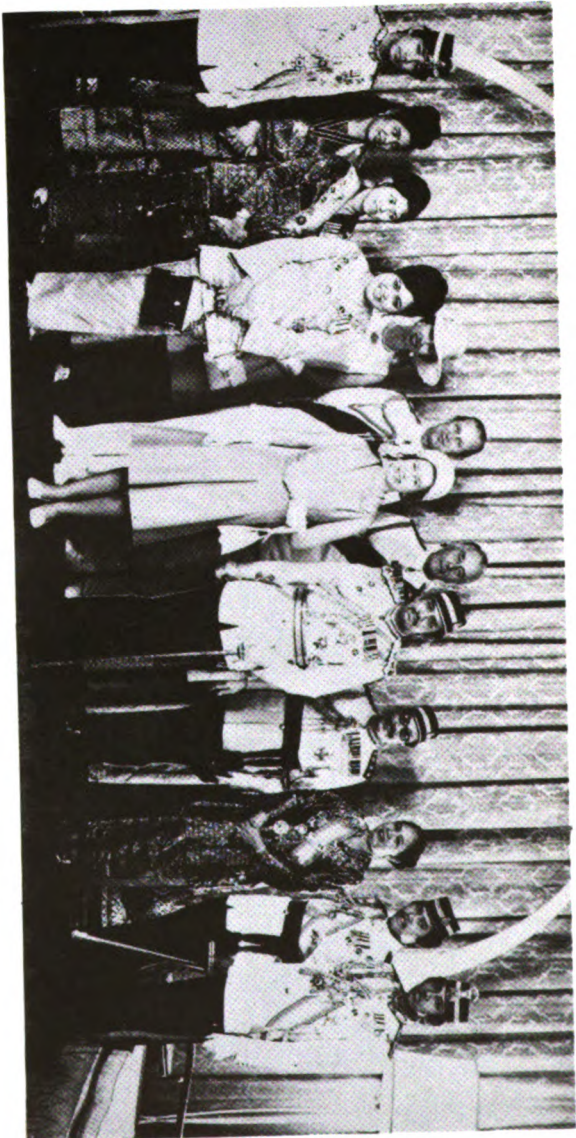
Her Majesty Queen Elizabeth the second and her husband His Royal Highness Prince Philip and their daughter Her Royal Highness Princess Anne rode in the Golden Chariot with His Highness the Sultan and other members of the Brunei Royal Family at the start of the Queen's official visit to Brunei on 29th, February 1972.



Arriving at the Dewan Majlis for a brief rest before proceeding to the Lapau for the Obeisance Ceremony.



Touring the Churchill Memorial Museum complex.



A group photograph taken at the Istana Darul Hana
Front row from left :

YTM Seri Paduka Duli Pengiran Muda Jefri Bolkiah, YTM Pengiran Anak Zariah, YTM Pengiran Anak Puteri Masna, HH the Raja Isteri, HM the Queen, HH the Sultan, DYTM Paduka Seri Begawan Sultan, DYTM Suri Seri Begawan Raja, YTM Paduka Seri Duli Pengiran Perdana Wazir Sahibol Himmah Wal Wagar' Muda Mohamed Bolkiah and YTM Paduka Seri Duli Pengiran Muda Sufri Bolkiah.

Back row from left :
HRH Princess Anne, HRH Prince Philip and Lord Mountbatten.

Royal Weddings



The wedding of Yang Teramat Mulla Seri Paduka Duli Pengiran Muda Jefri Bolkliah Ibni Duli Yang Teramat Mulla Paduka Seri Begawan Sultan Sir Omar Ali Saifuddin and Yang Mulla Pengiran Norhayati binte Pengiran Dato Paduka Haji Abdul Rahman took place on 31 / 8 / 1972.



The wedding of Yang Teramat Mulia Paduka Seri Duli Pengiran Anak Puteri Amal Umi Kalthum Al-Islam binti Duli Yang Teramat Mulia Paduka Seri Begawan Sultan Sir Omar Ali Saifuddin and Yang Mulia Pengiran Idris bin Pengiran Maharaja Lela Sahibul Kahar Pengiran Muda Abdul Kahar took place on 16/12/1972.

CONTENTS

- 1 General Review of Progress**
- 2 Physical Features**
- 3 Population and Vital Statistics**
- 4 Labour**
- 5 Public Finance and Taxation**
- 6 Commerce**
- 7 Production**
- 8 Social Development**
- 9 Law and Order**
- 10 Communications**
- 11 Public Works and Utilities**
- 12 A Brief History of Brunei**
- 13 Constitution and Administration**

CHAPTER 1

GENERAL REVIEW OF PROGRESS

Her Majesty The Queen's Visit

The year 1972 was a vitally memorable and eventful one for Brunei. It marked the Royal visit of Her Majesty Queen Elizabeth II to this country in a series of Royal visits to South East Asian countries.

The Queen's visit marked a significant event in the the relationship between Brunei and Britain, and strengthened the bond of friendship between the two countries.

His Highness the Sultan and Yang Di-Pertuan described the Royal visit as the highest honour ever paid to Brunei.

The Queen was accompanied by Her Husband His Royal Highness Prince Philip, the Duke of Edinburgh and Her daughter Her Royal Highness Princess Anne.

The Queen and the Royal party were received with full Brunei Royal tradition, a show of rich and colourful hereditary culture.

The Queen and the Royal Party were taken to various historical places and other places of interest, such as the Sultan Omar Ali Saifuddin mosque, the Brunei Museum and Churchill Memorial Centre.

Taxation of Finance:

There is no personal Income Tax in Brunei. Income Tax is imposed on limited companies at a flat rate of 30%. Oil companies pay Income Tax under a special agreement besides being subject to pay oil royalties and mining rents.

GENERAL REVIEW OF PROGRESS

Revenue for the State is collected under four headings or classes :-

Class I : Duties (Export, Import and Excise) Taxes
(Estate, Income and Stamp) Licences

Class II : Receipt for or in aid of specified government services (eg. fees of court of office).

Class III : Receipts on Account of undertakings of a commercial character ; Department Services .

Class IV : Revenue for Government property (Royalties, Rents, Interest, currency and others).

Total revenue for the State of Brunei increased from \$209,011,069 for the financial year 1971 to \$256,602,544 for 1972. This showed an increase of \$47,591,475.00.

Cost of administrating the State amounted to \$165,374,870 compared to the amount of \$115,983,561 for 1971. The increase in cost and the increase in revenue gave a surplus of \$91,227,674 as compared to \$53,027,509 for 1971 . However, the continued annual surplus gave a clear indication of the relative strength and stability of the State's financial position.

The surplus enable a development expenditure in the old and new programme to be maintained at \$50,954,871 lower than that for 1971 (\$73,934,037).

GENERAL REVIEW OF PROGRESS

Brunei investment in Sterling Trustee Stocks in Joint Consolidated Fund in other minor investments stood at \$686,493,473 in 1972. The Sterling Trustee Stocks was and would remain the biggest field of the State's overseas investment. From these investments the State derived around \$57 million in interest and currency payments.

External Trade:

The value of external trade for the State for 1972 was estimated at \$801,342,793 compared with \$780,187,637 for 1971. Total value of exports increased by \$277,501,623 while total value of import declined by \$156,348,467.

The trade balance for 1972 was favourable with exports exceeding import by more than \$200 million.

Export of crude oil remain the main substantial item representing approximately 92,77% (\$464,905,106 at F.O.B. Value).

The declared value of imports was \$300,205,055 compared to approximately \$456.5 million in 1971. The substantial decrease in the amount of import in 1972 was mainly due to a decrease in import of capital goods including machines and transport equipment. These had attributed to the big jump in the value of imports in 1971. Next in importance were manufactured goods followed by foodstuffs in third position. Rice is the main staple food and this is imported from Thailand with domestic supply to supplement the State's demand.

There are no import restrictions by high tariffs or import quotes. Trade with Britain and the other Commonwealth countries are subject to the British preferential

GENERAL REVIEW OF PROGRESS

Tariff of 5% import duty, while imports from countries outside the Commonwealth such as Japan, U.S.A. and Germany are subject to the General Tariff of 20% import duty. This tariff structure has been the only known one for the last two decades.

Figure of total tonnage of cargo discharged and loaded for the year under review indicated virtually a "one-way" flow. 353,095 tons of cargo was discharged while only 73,141 tons were loaded. Customs revenue collected from export and import duties some 7.79% to \$9,774,263.63 in 1972. Revenue collected on excise was negligible.

International Relations :

Brunei maintains particularly close relations with the United Kingdom. As provided in the amended Agreement, signed in November 1971, Her Majesty's Government continues to be responsible for the External Affairs of the State and, subject to consultation, provision for the defence and security of the State is a task to be shared between Her Majesty's Government and His Highness' Government. The State now enjoys full internal self-government.

In the field of international economic co-operation, Brunei has continued as an active associate member of the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP). Advice was sought and received from ESCAP and its sub-bodies. Through the British High Commission Brunei was involved indirectly in South East Asian Regional Projects and by other UN Agencies, eg World Health Organisation (WHO), the International Labour Organization (ILO) and the United Nations Development Programme (UNDP).

GENERAL REVIEW OF PROGRESS

Social Events

At the beginning of the year Mr. Peter Gautrey CMG CVO was appointed British High Commissioner in Brunei in succession to Mr. A.R.Adair CVO MBE. Mr. Adair was the longest serving High Commissioner for Brunei, having been here almost four years.

Another important events of the year were the Royal Marriages of Yang Teramat Mulia Seri Paduka Duli Pengiran Muda Jefri Bolkiah to Yang Mulia Pengiran Norhayati, a daughter of Pengiran Dato Paduka Haji Abd. Rahman, and Yang Teramat Mulia Pengiran Anak Puteri Amal Umi Kalthum Al-Islam to Yang Mulia Pengiran Idris bin Pengiran Maharaja Lela Shaibol Kahar Pengiran Muda Abdul Kahar. The full Brunei ceremonial traditions for Royal Marriages were scrupulously adhered to; the ceremonies deriving from a rich and colourful hereditary culture.

The year also witnessed the opening of the Legislative Council. At the opening ceremony of the Budget session, His Highness the Sultan and Yang Di-Pertuan commanded the Government to prepare a new Five Year National Development Plan for the State.

CHAPTER 2

PHYSICAL FEATURES

Brunei is situated on the north-west of the island of Borneo, between east longitudes $114^{\circ} 23'$ and $115^{\circ} 23'$ and between north latitudes 4° and $5^{\circ} 5'$ covering a total area of 2,226 sq. miles. It has a common border with Sarawak, one of the two eastern states of Malaysia, which also divides Brunei into two parts.

The western part of Brunei state, comprising Muara/Brunei, Tutong and Belait districts, consists predominantly of hilly lowland below 300 feet, but rising to over 1,000 feet in places on the Sarawak border.

The eastern part of the State, comprising Temburong District, consists predominantly of rugged mountains terrain, rising to 6,070 feet on Bukit Pagon. Near the coast, it has a wide, tidal and swampy plain. Narrow alluvial valleys extend up the main rivers:

Climate:

Generally in common with our surrounding neighbours, Brunei has a tropical rain climate. This is characterised by constant temperature and humidity and high rainfall.

Temperatures are high throughout the year and the annual extreme range of temperature is 73°F to 89°F .

Relative humidity is high, and average fluctuation between 67% to 91% throughout the year.

PHYSICAL FEATURES

Topography :

The land surface is developed on bedrock of Tertiary age, comprising sandstones, shales and clays. Several factors have influenced the moulding of this surface into its present form, namely the comparatively youthful state of the present cycle of geological erosion, the nature and angle of dip of the strata and the climate factors of high rainfall and the temperatures that maintain a dense forest cover on all landforms and induce deep chemical weathering and rapid erosion. These have contributed to produce a strong undulating ridge and valley terrain with universally steep slopes. Erosion occurs even under a forest canopy, but the rate is considerably accelerated when the forest is cleared. The sediments washed off the hills are re-distributed by rivers and floods to form the extensive alluvial plain near the coast.

Most of the soils in Brunei are relatively young. The main process of soil formation is one of continuous downward leaching of the products of weathering producing a soil in which the upper layers are depleted of these products and the lower layers enriched.

Vegetation :

There is a general correlation between soils and types of vegetation. The forests of Brunei cover 1,678 sq. miles, or 75% of the total area of the State. Mangrove forests are found at sea level; Heath Forests are found on sandy alluvial soils usually below 100 feet above the sea level but occasionally also on high altitude sand-stone ridges in ulu Temburong; Peat Swamp Forests are along the lower reaches of the main river but separated by mangrove and Heath Forests from the sea; Mixed Dipterocarp Forests are immediately above the Peat Swampy Forests and extending

PHYSICAL FEATURES

up to about 4,200 feet above sea level; and Montane Forests cover about 4,200 feet and are found only in the south east of Ulu Temburong.

Water Resources :

Although rainfall is high, water resources are difficult to develop. Water in the main rivers is blackish for many miles upstream and the catchment of most streams in the coastal zone is inadequate for major supply schemes. Exploitable ground water is scarce because the impermeability of both alluvial and bedrock strata restricts supplies from this source.

Minerals:

Oil, found in Seria is the most important mineral and it provides almost all of Brunei's wealth. Oil explorations are continuously undertaken in other part of the State by several over-seas oil Companies. Offshore discoveries have significantly increased the oil output supplementing decreasing land output.

Quantity and quality of other minerals, coal, limestone, silica sand and gravel, have been investigated but with the exception of silica sands economic utilization of these minerals is doubtful at the present time, though gravel is mined on a supplementary scale.

CHAPTER 3

POPULATION AND VITAL STATISTICS

The Director of Medical Services is ex-officio, the Registrar of Births and Deaths, and by law is responsible for the preparation of population estimates for the State.

The Government Statistics Department now maintains very valuable and important coordinative supervision of data derived from the Births and Deaths Registry, and from movement figures provided by the Immigration Department.

A State-wide Census was held in 1971. The population was found to be 136,256. The Estimate of the mid-year population for 1972 is 141,500 divided among the four districts of the State as follows:-

BRUNEI/MUARA	75,665
BELAIT	44,070
TUTONG	16,355
TEMBURONG	5,410

The increase in population over 1971 was 5,143 or 3.8 per cent. This is lower than the average annual increase of 4.5 per cent between the census years 1960 and 1971.

The number of births registered in 1972 was 5008. This is an excellent indicator of the state of the basic population. The Crude Birth Rate is 35.39.

The number of deaths registered in 1972 was 742 giving a Crude Death Rate of 5.24.

The following tables give other important details of the make-up of the population by race, sex and geographical distribution.

POPULATION AND VITAL STATISTICS

The predominant religions refer to the Census of 1971.

An important factor in population figures is the influence of immigration. Table 7 shows that in 1972 there was a slight excess of immigration over emigration.

POPULATION AND VITAL STATISTICS

Table 1—POPULATION AND VITAL STATISTICS, 1968—1972

Mid-year	Population	No. of live Births	Birth Rate (per thousand population)	No. of Deaths	Death Rate (per thousand population)	No. of Infant Deaths	Infant Mortality Rate (per thousand live births)
1968 Revised	119,282	4912	41.18	715	5.99	207	42.12
1969 Revised	124,649	4614	37.02	691	5.54	198	42.91
1970 Revised	130,260	4816	36.97	715	5.49	163	33.85
1971 Census	136,256	5181	38.01	801	9.10	199	38.40
1972 Estimate	141,500	5008	35.39	742	5.24	177	35.34

Table 2—VITAL STATISTICS BY DISTRICT, 1972

	Brunei	Belait	Tutong	Temborong.	Total
Population	75,665	44,070	16,355	5,410	141,500
Percentage	53.47	31.14	11.56	3.83	100.00
No. of live births	2,993	1,302	514	199	5,008
Birth rate /100	39.55	29.54	31.42	36.78	35.39
No. of infant deaths	115	35	19	8	177
Infant mortality rate/100	38.75	26.88	35.10	40.10	35.34
No. of deaths	427	188	98	29	742
Death rate /100	5.64	4.27	5.97	5.36	5.24
Delivery by midwives	875	257	82	27	2,241
Hospital deliveries (Including * B.S.P. Hospital)	1,016	812	-	-	1,827
Number of births before arrival of midwives	803	141	175	41	1,160

* B.S.P. Hospital : Brunei Shell Petroleum Hospital.

POPULATION AND VITAL STATISTICS

Table 3—NUMBER OF TOTAL DEATHS IN 1972, STATE OF BRUNEL, BY SEX AND RACIAL GROUP

District	Malay		Other Indig.		Chinese		Others		Total		Total
	M	F	M	F	M	F	M	F	M	F	
Brunel	137	148	45	17	41	26	7	6	230	197	427
Temburong	10	7	9	2	1	-	-	-	20	9	29
Tutong	12	7	34	36	6	2	1	-	53	45	98
Belait	30	34	21	12	50	25	12	4	113	75	188
Total	189	196	109	67	98	58	20	10	416	326	742

Table 4—RACIAL DISTRIBUTION IN MID—1972

District	Total	Malay	Other Indig.	Chinese	Others
Brunel/Muara	75,665	57,129	2,240	14,022	2,274
Belait	44,070	17,781	4,866	17,112	4,311
Tutong	16,355	13,113	1,411	1,562	269
Temburong	5,410	3,491	1,398	416	105
State Total	141,500	91,514	9,915	33,112	6,959

Table 5—DISTRIBUTION BY SEX IN MID—1972

District	Total	Percentage	Male	Female
Brunel/Muara	77,665	53.47	39,695	35,970
Belait	44,070	31.14	24,810	19,260
Tutong	16,355	11.56	8,489	7,866
Temburong	5,410	3.83	2,885	2,525
State Total	141,500	100.00	75,879	65,621

POPULATION AND VITAL STATISTICS

Table 6—RELIGIOUS GROUPS (CENSUS 1971)

Total	Muslim	Christian	Buddhist	Others	Unknown
136,256	84,700	10,425	18,373	18,612	4,146

Table 7—RETURN OF PERSONS ENTERING AND LEAVING THE STATE, 1972

Nationality	Entering			Leaving		
	Total	Male	Female	Total	Male	Female
Australia	765	530	235	1,311	880	431
Brunei	27,582	17,930	9,652	40,465	26,071	14,394
Canada	405	268	137	486	354	132
Ceylon	233	144	89	226	146	80
China (Taiwan)	370	286	84	451	377	74
France	157	112	45	132	103	29
Germany, Feb. Rep.	186	154	32	344	317	27
Hongkong Chinese	458	365	93	799	688	111
India	2,262	2,042	220	2,173	1,976	197
Indonesia	58	51	7	12	10	2
Japan	865	829	36	925	890	35
Korea, Rep. of	727	683	44	766	715	51
Malaysia:—						
Chinese	80,788	59,025	21,763	69,403	47,823	19,580
Dayak	31,606	25,964	5,642	21,889	17,510	17,510
Malay	34,905	23,449	29,660	31,897	21,276	10,621
Others	2,041	1,637	404	5,249	4,134	1,115
Netherlands	501	939	562	2,422	1,620	802
New Zealand	259	185	74	353	262	91
Pakistan	165	163	2	220	216	4
Philippines	266	180	86	312	224	88
Singapore	5,834	4,901	933	6,001	5,086	915

POPULATION AND VITAL STATISTICS

Switzerland	91	64	27	81	62	19
U.K. (Indig.)	5,024	3,500	1,520	5,771	4,226	1,545
British (Non-indig.)	1,116	818	298	1,178	859	319
U.S.A.	2,004	1,653	351	2,746	2,200	546
Other Countries	601	437	164	1,069	803	266
Stateless	5,026	3,059	1,967	5,864	3,901	1,963
Total	205,295	149,368	55,927	202,545	144,729	57,816

CHAPTER 4

LABOUR

Industrial Structure

Table 1 (pages 1 - 8) of the Statistical Appendix shows how the industrial structure of Brunei consists mainly of small-scale enterprises. Out of 1,085 establishments submitting returns to the Labour Department, more than sixty per cents employ five people or less and only 115 have more than 25 employees. The structure is largely dominated by the Government and the oil industry, the latter accounting for over ninety per cents of the value of the State's exports. Outside the oil-field the Government is itself the principal supplier of essential community services, namely medical and health, welfare, municipal services, public utilities and education. Next in order of size are the construction, distributive and service industries, which have been stimulated by the extensive programme of public works instigated over the last few years and by the demands of a growing and prosperous population for goods and services. The farming and fishing industries are operated mainly by individuals or small groups, usually self-employed with occasional hired help. A small logging and sawmilling industry operates under annual licences for the production of timber for local use. Finally there are a variety of very small manufacturing and processing establishments producing furniture, bricks aerated waters and other articles for consumption locally.

The Labour Department

2. The duties and functions of the Labour Department are:-
 - (a) to administer the labour code and thereby ensure that satisfactory standards of employment are maintained and that measures for the protection of workers are properly enforced;

LABOUR

- (b) to carry out regular inspection of places where workers are employed;
- (c) to conciliate in collective trade disputes and in disputes between individual employers and workers;
- (d) to promote joint consultative machinery and collective bargaining in industry;
- (e) to register trade unions and to advise them as necessary regarding the requirements of the Trade Unions Enactment;
- (f) to ensure the settlement of workmen's compensation claims by agreement or through the statutory processes of enquiry and arbitration;
- (g) to operate employment exchanges; and
- (h) to collect and publish statistics.

The commissioner of Labour is also responsible for advising the Government generally on matters relating to labour and industrial relations.

3. The Department maintains a headquarters office in Bandar Seri Begawan and a branch office in Kuala Belait, some 67 miles distant at the other end of the State. It has an authorised establishment of a Commissioner, and an Adviser, eight executive officers (inspectors) and twelve clerical officers (one of whom is employed on executive duties), but two executive posts and one clerical post remained vacant throughout the year. An organisation chart (excluding unfilled posts) is attached as Annexure A.

LABOUR

The estimated and actual expenditure of the Department for the year under review was:-

Personal Emoluments	Estimated	Actual
Commissioner, Adviser and Executive Staff	\$116,180	\$103,725
Clerical Staff	56,065	49,709
	<hr/>	<hr/>
	\$172,245	\$153,434
 Other Charges		
Transport and Travelling	\$ 18,000	\$ 13,590
Other Recurrent Charges	\$ 6,850	\$ 4,952
	<hr/>	<hr/>
	24,850	18,542
	<hr/>	<hr/>
Total Expenditure	\$197,095	\$171,976

Legislation,

4. The Enactments and subsidiary legislation administered by the Department are listed in Annexure. There were no changes or additions during the year.

International Labour Conventions

5. A statement of the application to Brunei of the International Labour Conventions ratified by the United Kingdom Government is given in Annexure C.

LABOUR

Economic Activity

6. The census carried out in August, 1971, showed some 40,000 persons as being economically active. This represents just over half the population of the State aged 15 years or over. The following table gives the distribution of the economically active population by type of activity and sex:-

	M	F	T
Employers	339	25	364
Employees	28,285	4,381	32,666
Self-employed and family workers	4,938	2,044	6,982
Total economically active	33,562*	6,450	40,012
Total population aged 15 years or over	42,663	34,457	77,120

* These figures exclude a small percentage, just over 1,000 persons, who declared themselves as unemployed on census day.

Distribution of the economically active population by major industrial group was:-

	M	F	T
Agriculture, Forestry and Fishing	3,296	1,480	4,776
Mining, Quarrying and Manufacturing	4,186	480	4,666
Electricity and Water Supply	1,061	25	1,086
Building and Construction	7,929	161	8,090

LABOUR

Trading Undertakings	3,332	857	4,189
Transport, Storage and Communications	2,034	93	2,127
Financial and Service Undertakings	11,673	3,335	15,008
All industries	33,511*	6,431*	39,942*

Employment in 1972

7. The annual survey carried out by the Labour Department showed a total of 27,646 salary and wage earners in the State on the 30th June, 1972. Details of industrial and occupational distribution, sex, age group and resident-status are given in Tables 2 - 10 (pages 45-53) of the Statistical Appendix. It will be seen that the figure is some 5,000 less than the number of employees revealed by the 1971 Census. The Labour Department survey, however, excludes the Armed Forces and it also does not cover private domestic servants. There were also a number of employers who failed to submit returns or whose returns did not arrive in time to be tabulated.

Employment of Migrants

8. It will be apparent from a study of Tables 1 - 10 of the Statistical Appendix that Brunei is very much dependent on migrants, both skilled and unskilled, for the manpower needed to support her economy. This is particularly the case with the construction industry, but other industries too employ substantial numbers of migrants. Their employment

* The totals exclude 70 persons shown in the census tables as "industry unknown"

is controlled by means of employment passes, which are issued by the Controller of Immigration, acting under the Immigration Regulations, in consultation with the Commissioner of Labour. This applies to the entry of professional, clerical and sales workers as well as to manual workers whose conditions of employment are also controlled by the Commissioner of Labour in the exercise of his powers under the Labour Enactment.

9. In recent years the Government has become concerned at the high level of migrant employment in the State. It is the aim of policy to reduce this dependence on manpower from abroad by requiring employers whenever possible to give priority to Brunei citizens in filling vacancies in their establishments and also to undertake local training. In keeping with this policy, arrangements were made during 1972 for applications for employment passes to be subjected to a closer scrutiny by the Labour Department. Under these arrangements employers are being required to provide fuller particulars of the qualifications and experience required for the posts in which migrants are being employed and to indicate the steps being taken to train citizens to permanent residents to fill them. Although the system is still in an experimental stage, it has already proved to be of some value in curtailing the unnecessary employment of migrant staff and workers.

10. In 1972 over 9,000 such applications were examined by the Department at Bandar Seri Begawan and Kuala Belait as follows:-

LABOUR

Occupational Group	Bandar Seri Begawan			Kuala Belait		
	M	F	T	M	F	T
Professional, Technical and Related Workers	99		99	90		90
Administrative and Managerial Workers	163		163	84		84
Clerical and Related Workers	262	30	292	76	28	104
Sales Workers	407	5	412	193	7	200
Service Workers	227	301	528	478	240	718
Agricultural, Forestry and Fishing Workers	285	2	287	217		217
Skilled or Semiskilled Tradesmen	2,036	93	2,129	1,537		1,537
Unskilled General Labourers	1,240	1	1,241	1,012	4	1,016
	<u>4,719</u>	<u>432</u>	<u>5,151</u>	<u>3,687</u>	<u>279</u>	<u>3,966</u>

The figures include applications in respect of re-engagements and changes of employment as well as for new arrivals.

11. Just under half the migrants working in the State during 1972 came from East Malaysia. They comprised both skilled and unskilled persons, the latter being mainly Ibans from Sarawak. Most of them came under their own arrangements and at their own expense, being attracted by the high wages.

LABOUR

rates prevailing in Brunei. The greater part of the remainder were skilled persons recruited on short-term contracts from Singapore, Hongkong and other Asian countries, the expenses of their journeys to Brunei and repatriation at the end of their contracts being paid by their employers. Because of housing problems only a minority in either category were accompanied by dependants.

Employment Placement

12. Employment Exchanges are operated by the Labour Department at Bandar Seri Begawan and Kuala Belait. Since the demand for the service is largely confined to school leavers and unskilled or semi-skilled persons seeking unestablished posts in Government Departments the scope of operations is not wide. The following table show the number of applicants registered at the Exchanges (including re-registrations), vacancies notified, introductions to employers and vacancies filled during 1972:-

	Bandar Seri Begawan				Kuala Belait				Total			
	M	F	T		M	F	T		M	F	T	
Applicants registered (including re-registration)	857	829	1,686	340	157	497	1,197	986	2,183			
Vacancies notified	220	133	353	114	18	132	334	151	485			
Introductions to employers	368	241	609	356	24	380	724	265	989			
Vacancies filled	220	133	353	114	18	132	334	151	485			

LABOUR

The age groups of registrants were as follows:-

	Bandar Seri Begawan			Kuala Belait				Total		
	M	F	T	M	F	T	T	M	F	T
Under 18 years	349	318	667	22	9	31		371	327	698
18 - 20 years	256	276	532	123	52	175		369	328	707
Over 21 years	252	235	487	195	96	291		447	331	778

Registrants were placed with Government Departments
(including Town Boards) and other establishments as
follows:-

	Bandar Seri Begawan			Kuala Belait				Total		
	M	F	T	M	F	T	T	M	F	T
Government Departments	157	119	276	59	16	75		216	135	351
Others	63	14	77	55	2	57		118	16	134

The occupational categories of placed registrants were
as follows:-

	Bandar Seri Begawan			Kuala Belait				Total		
	M	F	T	M	F	T	T	M	F	T
Unskilled Labourers	34		34	95	9	104		129	9	138
Skilled or semi- skilled Tradesmen	12		12	13		13		25		25
Clerical and Related workers	63	110	173	4	7	11		67	117	184
Others	111	23	134	2	2	4		113	25	138

Industrial Training

13. The Government Trade Schools at Bandar Seri Begawan and Kuala Belait provide full time instructional courses in building and engineering trades respectively. The Brunei Shell Petroleum Company has its own vocational school, with courses in electrical, mechanical, instrumentation and aviation engineering trades.

Wages, hours of work and holidays

14. For the most part wages are based on daily rates except in the oil industry where monthly rates are the rule. There are however numerous exceptions both in Government and in private industry where certain categories of skilled tradesmen, charge hands and foremen are on monthly rates. Tradesmen in the construction industry are generally paid at contract rates dependent on the out-turn per gang of workers, but subject to a guaranteed minimum daily rate. The same system prevails in logging camps and in stevedoring.

15. In the oil industry wages, hours of work, holidays and other conditions of employment are fixed by collective negotiation with the trade unions concerned. In other industries wages are determined by reference to the levels generally prevailing in the industry for the type of work involved, and on the average the rates exceed those paid in neighbouring territories. The method of payment, deductions, restrictions on the manner in which wages may be spent and truck generally are forbidden or controlled by the Labour Enactment.

16. Outside the oil industry where a 42 hour week has been fixed by collective agreement, normal hours of work are

LABOUR

generally based on the eight-hour day and the six day week prescribed by the Labour Enactment. The Enactment also prescribes eight days in the year as paid holidays for manual workers, but many employers give paid leave annually or (in the case of migrants) at the end of the term of engagement.

17. Statistical information on wages, earnings and hours of work in the State is given in Tables 11 - 16 (pages 254 -59) of the Statistical Appendix.

Inspection and Enforcement

18. All establishments where manual workers are employed are liable to inspection under the Labour Enactment. Hotels, restaurants and other institutions employing lodging and catering service workers are also liable to inspection by virtue of the Labour (Domestic Servants) Rules, 1971. During 1972 formal visits of inspection were paid to rather less than half of the 797 places of employment which were on record as being liable to inspection. That figure, however, includes 264 building contractors, not all of whom were actually engaged on contracts throughout the year. Details of the industries and the number and size of the places inspected are given in Table 17 (page 60) of the Statistical Appendix.

19. There is still a great deal of room for improvement in the standards observed at many places of employment, especially small workshops and sawmills. But it is the policy of the Department to try to effect improvements by advice and encouragement, and not to resort to prosecution except in cases where cooperation is deliberately withheld or warnings are repeatedly ignored. There were no such cases during the year under review.

Industrial Accident and Workmen's Compensation

20. The Workmen's Compensation Enactment requires employers to report all industrial accidents and cases of occupational disease resulting in the total or partial disablement of a workman for more than four days. Subject to certain exceptions (e.g. the Forces, police officers and family or casual workers) it covers all manual workers and also non-manual employees if their earnings do not exceed \$500 per month. It prescribes for temporary disablement half-monthly payments of on third earnings or \$65, whichever is less. In many cases however, employers continue to pay full wages for periods of temporary disablement so that the question of compensation does not arise. Benefits payable for death or permanent disablement are related to 36 or 48 months earnings, subject to maxima of \$7,200 or \$9,600 respectively. Medical attention and, where necessary, surgical appliances are also provided free of charge to injured workmen. The amount of compensation payable in each case is settled by agreement between the employer and workman concerned and the Commissioner of Labour who is ex-officio Commissioner for Workmen's Compensation, for which purpose he has powers of enquiry. The Enactment also provides for arbitration in disputed cases.

21. In consequence of the large amount of construction being carried out in connection with the public development programme the accident rate rose sharply in 1969 and 1970. With the completion of most of the works involved, the rate has declined during the last two years as is shown by the following table:-

LABOUR

Year	Notifiable Accidents	Temporary Disablement	Permanent Disablement	Death	Total
1968	55	-	-	-	13,866
1969	116	8,176	29,869	21,420	59,465
1970	146	13,313	32,213	49,337	94,903
1971	125	9,024	28,345	36,000	73,369
1972	104	8,767	14,201	23,472	46,440

Full details regarding accidents, injuries and compensation payments in 1972 are contained in Tables 18-23 (pages 61-69) of the Statistical Appendix.

Industrial Relations

22. No collective disputes were brought to notice during the year, although a number of individual complaints were investigated and dealt with by officers of the Labour Department.

23. All trade unions are required to register under the Trade Unions Enactment, the Commissioner of Labour being ex-officio Registrar of Trade Unions. The Trade Disputes Enactment accords to trade unions the customary immunities and protection in respect of acts done in furtherance of trade disputes. It prescribes procedures for conciliation and, subject to the consent of the parties, arbitration in disputes where machinery within the industry concerned does not exist or has failed to achieve a settlement. The Enactment also contains special provisions regarding essential services.

24. Combination, whether of employers or workers, is not yet extensively practised in Brunei. As has already been observed, the industrial structure consists almost entirely of small scale enterprises. This state of affairs makes for closer personal contact between proprietors or managers

and employees individually than is the general rule in communities where the industrial organisation is on a wider scale, so that except in the oil industry systems of collective bargaining have not yet emerged. Other contributory factors are the absence of workers with experience of organising trade unions and the existence of traditional craft guilds among the Chinese who form a majority of the skilled workers in the State.

25. The following is a list of the trade unions on the register at the end of the year, with the date of registration and reported membership:-

Name	Date of Registration	Reported Membership
The Brunei Government Workers Union	17th July, 1962	2,689
The Brunei Oilfield Workers Union	17th July, 1962	660
The Brunei Government Medical and Health Department Employees Union.	2nd September, 1963	347
The Brunei Government Clerks and Peons Union.	16th May, 1968	180
The Royal Brunei Customs Department Staff Union	19th July, 1972	52

Only the first two of the above are trade unions of manual workers.

LABOUR

26. The collective agreement between the Brunei Shell Petroleum Company Ltd. and the Brunei Oilfield Workers' Union expired in April and a fresh agreement for a term of three years was signed on the 27th July and came into force on the 1st August.

ANNEXURE A

Organisation Chart - 1972

(The chart shows only posts actually filled)

Headquarters				
1 Commissioner Of Labour 1 Adviser 1 Stenographer.				
Administration	Inspectorate	Employment	Registration & Statistics	Kuala Belait
1 clerk Gde A (Special Appointment) 1 Clerk Grade A 1 Peon	1 Labour Inspector 1 Assistant Labour Inspector	1 Senior Labour Inspector 1 Assistant Labour Inspector 2 Clerk Grade A 1 Clerk Grade B	1 Clerk Grade B (Superscale I) 1 Clerk Grade B	1 Labour Inspector 1 Assistant Labour Inspector 1 Clerk Grade B 1 Peon

LABOUR

ANNEXURE B

List of Enactments and Subsidiary Legislation administered by the Commissioner of Labour.

1. **The Labour Enactment (No. 11 of 1954 as amended by nos 6 and 18 of 1957 and no 15 of 1961), with subsidiary legislation as follows:-**

The Labour (Maternity Benefits) Rules, 1955

The Labour (Restriction on Employment of Children) Notification, 1955

The Labour (Special Places of Employment) Notification, 1955 (as amended)

The Labour (Public Holidays) Rules, 1956

The Labour (Domestic Servants) Rules, 1971

The Labour (Public Contracts) Rules, 1971

The Labour (Immigrant Workers' Employment Licences) Rules, 1971

The Labour (Limitation of Duties and Powers) Rules, 1971

2. **The Workmen's Compensation Enactment (No. 5 of 1957 as amended by No 7 of 1964), with subsidiary legislation as follows:-**

The Workmen's Compensation Regulations, 1957

3. **The Trade Unions Enactment (No 5 of 1961) with subsidiary legislation as follows:-**

LABOUR

The Trade Unions (Registration) Regulations, 1962

**The Trade Unions (Accounting Procedure) Regulations ,
1962**

4. The Trade Disputes Enactment (No 5 of 1961)

ANNEXURE C

**Declarations deposited on behalf of Brunei in respect of
International Labour Conventions ratified by the United
Kingdom Government.**

- A = Applied without modification**
B = Applied without modification
C = Convention not applicable
D = Decision Reserved.

Convention,	Declaration.
No 2: Unemployment, 1919	D
5: Minimum Ago (Industry), 1919	B
7: Minimum Ago (Sea), 1920	A
8: Unemployment Indemnity (Shipwreck), 1920	A
10: Minimum Ago (Agriculture), 1921	B
11: Right of Association (Agriculture), 1921	A
12: Workmen's Compensation (Agriculture), 1921	A
15: Minimum Ago (Trimmers and Stokers), 1921	A
16: Medical Examination of Young Persons (sea), 1921	A
17: Workmen's Compensation (Accidents), 1925	D
19: Equality of Treatment (Accident Compensation), 1925	A
22: Seamen's Articles of Agreement, 1926	D

24: Sickness Insurance (Industry), 1927	D
25: Sickness Insurance (Agriculture), 1927	D
26: Minimum Wage-Fixing Machinery, 1928	D
29: Forced Labour, 1929	A
32: Protection against Accidents (Dockers) (Revised), 1932	D
35: Old-age Insurance (Industry etc), 1933	D
36: Old-age Insurance (Agriculture), 1933	D
37: Invalidity Insurance (Industry etc), 1933	D
38: Invalidity Insurance (Agriculture), 1933	D
39: Survivor's Insurance (Industry etc), 1933	D
40: Survivor's Insurance (Agriculture), 1933	D
42: Workmen's Compensation (Occupational Diseases) (Revised), 1934	A
44: Unemployment Provision, 1934	D
45: Underground Work (Women), 1935	D
50: Recruitment of Indigenous Workers, 1936	A
56: Sickness Insurance (Sea), 1936	D
63: Statistics of Wages and Hours of Works, 1938 (excluding Parts II and IV)	A
64: Contracts of Employment (Indigenous Workers), 1939	A
65: Penal Sanctions (Indigenous Workers), 1939	A
68: Food and Catering (Ship's Crews), 1946	D

LABOUR

	Convention	Declaration
No	69: Certification of Ships Cooks, 1946	D
	70: Social Security (Seafarers), 1946	D
	74: Certification of Able Seamen, 1946	D
	81: Labour Inspection, 1947	A
	82: Social Policy (Non-Metropolitan Territories), 1947	B
	83: Labour Standards (Non-Metropolitan Territories), 1947	B
	84: Right of Association (Non-Metropolitan Territories), 1947	A
	86: Contracts of Employment (Indigenous Workers), 1947	B
	87: Freedom of Association, 1948	D
	89: Night Work (Women) (Revised), 1948	D
	90: Night Work of Young Persons (Industry) (Revised), 1948	D
	92: Accommodation of Crews (Revised), 1949	D
	94: Labour Clauses (Public Contracts), 1949	A
	95: Protection of Wages, 1949	A
	97: Migration for Employment (Revised), 1949	D
	98: Right to Organise and Collective Bargaining, 1949	A
	99: Minimum Wage Fixing Machinery (Agriculture), 1951	D
101:	Holidays with Pay (Agriculture), 1952	D
102:	Social Security (Minimum Standards), 1952	D
105:	Abolition of Forced Labour, 1957	A
108:	Seafarers' Identity Documents, 1958	A
115:	Radiation Protection, 1960	D
122:	Employment Policy, 1964	D
124:	Medical Examination of Young Persons (Underground Work), 1965	C

LABOUR

STATISTICAL APPENDIX

Employment, Occupation and Industry

Table 1	Number of Workers and Number and Size of Employing Establishments by Industrial Divisions and Groups.	Page 37-44
Table 2	Professional, Technical and Related Workers by Major Industrial Divisions.	Page 45
Table 3	Administrative, Executive and Managerial Workers by Major Industrial Divisions.	Page 46
Table 4	Clerical and Related Workers by Major Industrial Divisions.	Page 47
Table 5	Sales Workers by Major Industrial Divisions	Page 48
Table 6	Service Workers by Major Industrial Divisions.	Page 49
Table 7	Agriculture, Animal Husbandary and Forestry Workers by Major Industrial Divisions.	Page 50
Table 8	Production and Related Workers, Transport Equipment Operations and Labourers by Major Industrial Divisions.	Page 51
Table 9	All Workers by Major Industrial Divisions.	Page 52
Table 10	All Workers by Major Industrial Divisions and Major Occupational Group.	Page 53

Wages, Earnings and Hours of Works

Table 11	Average Wage Rates, Earnings and Hours of Work for Industrial and Manual Workers (Time Rates) in Mining, Manufacturing and Construction Industries.	Page 54
Table 12	Average Wage Rates, Earnings and Hours of Work for Industrial and Manual Workers (Monthly Rates) in Mining, Manufacturing and Construction Industries.	Page 55
Table 13	Average Wage Rates, Earnings and Hours of Work for Industrial and Manual Workers (Daily/Hourly Rates) in Mining, Manufacturing and Construction Industries.	Page 56
Table 14	Average Wage Rates, Earnings and Hours of Work for Clerical, Distributive and Service Workers (Men and Women) in All Industries.	Page 57
Table 15	Average Wage Rates, Earnings and Hours of Work for Clerical, Distributive and Service Workers (Men) in All Industries.	Page 58

LABOUR

Table 16	Average Wage Rates, Earnings and Hours of Work for Clerical, Distributive and Service Workers (Women) in All Industries.	Page 59
----------	--	---------

Inspection of Places of Employment

Table 17	Number and Sizes of Places of Employment Liable to Inspection and Inspected.	Page 60
----------	--	---------

Industrial Accidents and Workmen's Compensation

Table 18	Distribution by Industry of Accidents Resulting in Death or Permanent Disablement, Compensation Paid and Degree of Disablement.	Page 61
Table 19	Analysis by Cause of Accidents Resulting in Death or Permanent Disablement, Compensation Paid and Degree of Disablement.	Page 62
Table 20	Distribution by Industry of Accidents Resulting in Temporary Total Disablement, Duration of Disablement, Compensation Payments and Man days Lost.	Page 63
Table 21	Analysis by Cause of Accidents Resulting in Temporary Total Disablement, Duration of Disablement, Compensation Payments and Man days Lost.	Page 64-65
Table 22	Analysis by Occupation of Persons Killed or Disabled by Industrial Accidents.	Page 66-68
Table 23	Analysis of Industrial Injuries by Nature and Location.	Page 69

Note on Sources

Tables 1 - 10 (Employment, Occupation and Industry) have been compiled from returns furnished by employers in the State. The figures do not include members of the Armed Forces or private servants employed otherwise than for the purpose of the trade, business or profession of the employer.

Tables 11- 16 (Wages, Earnings and Hours of Work) have been compiled from returns furnished by a representative sample of employers. They cover the principal industrial and manual occupation in mining, manufacturing and construction industries and the principal clerical, distributive and service occupations in all industries.

The remaining Tables have been prepared from the records kept by the Labour Department.

TABLE 1
NUMBER OF WORKERS AND NUMBER AND SIZE EMPLOYING ESTABLISHMENTS IN INDUSTRIAL DIVISIONS AND GROUPS

INDUSTRIAL DIVISIONS AND GROUPS	NUMBER OF WORKERS			NUMBER AND SIZE OF EMPLOYING ESTABLISHMENT					
	TOTAL	Citizens and other Permanent Residents	Temporary Residents	1 - 5 workers	6 - 25 workers	26 - 100 workers	101 - 500 workers	over 500 workers	TOTAL
1. AGRICULTURE, FORESTRY AND FISHING	913	693	220	44	10	4	2		60
11 Agriculture	730	537	113	41	7	3	1		52
12 Forestry	117	107	10	2	1		1		4
13 Fishing	66	49	17	1	2	1			
2. PRODUCTION OF OIL AND NATURAL GAS	3,084	1,912	1,172	3	2	3		1	9
3. SAWMILLING AND OTHER TIMBER PROCESSING INDUSTRIES	469	189	280	2	11	7			20
4. OTHER MINING, QUARRYING AND MANUFACTURING INDUSTRIES	952	273	679	98	38	6			142

LABOUR

Table 16	Average Wage Rates, Earnings and Hours of Work for Clerical, Distributive and Service Workers (Women) in All Industries.	Page 59
----------	--	---------

Inspection of Places of Employment

Table 17	Number and Sizes of Places of Employment Liable to Inspection and Inspected.	Page 60
----------	--	---------

Industrial Accidents and Workmen's Compensation

Table 18	Distribution by Industry of Accidents Resulting in Death or Permanent Disablement, Compensation Paid and Degree of Disablement.	Page 61
Table 19	Analysis by Cause of Accidents Resulting in Death or Permanent Disablement, Compensation Paid and Degree of Disablement.	Page 62
Table 20	Distribution by Industry of Accidents Resulting in Temporary Total Disablement, Duration of Disablement, Compensation Payments and Man days Lost.	Page 63
Table 21	Analysis by Cause of Accidents Resulting in Temporary Total Disablement, Duration of Disablement, Compensation Payments and Man days Lost.	Page 64-65
Table 22	Analysis by Occupation of Persons Killed or Disabled by Industrial Accidents.	Page 66-68
Table 23	Analysis of Industrial Injuries by Nature and Location.	Page 69

Note on Sources

Tables 1 - 10 (Employment, Occupation and Industry) have been compiled from returns furnished by employers in the State. The figures do not include members of the Armed Forces or private servants employed otherwise than for the purpose of the trade, business or profession of the employer.

Tables 11- 16 (Wages, Earnings and Hours of Work) have been compiled from returns furnished by a representative sample of employers. They cover the principal industrial and manual occupation in mining, manufacturing and construction industries and the principal clerical, distributive and service occupations in all industries.

The remaining Tables have been prepared from the records kept by the Labour Department.

TABLE 1
NUMBER OF WORKERS AND NUMBER AND SIZE EMPLOYING ESTABLISHMENTS IN INDUSTRIAL DIVISIONS AND GROUPS

INDUSTRIAL DIVISIONS AND GROUPS	NUMBER OF WORKERS			NUMBER AND SIZE OF EMPLOYING ESTABLISHMENT					
	TOTAL	Citizens and other Permanent Residents	Temporary Residents	1 - 5 workers	6 - 25 workers	26 - 100 workers	101 - 500 workers	over 500 workers	TOTAL
1. AGRICULTURE, FORESTRY AND FISHING	913	693	220	44	10	4	2		60
11 Agriculture	730	637	113	41	7	3	1		52
12 Forestry	117	107	10	2	1		1		4
13 Fishing	66	49	17	1	2	1			
2. PRODUCTION OF OIL AND NATURAL GAS	3,084	1,912	1,172	3	2	3		1	9
3. SAWMILLING AND OTHER TIMBER PROCESSING INDUSTRIES	469	189	280	2	11	7			20
4. OTHER MINING, QUARRYING AND MANUFACTURING INDUSTRIES	952	273	679	98	38	6			142

LABOUR

NUMBER OF WORKERS AND NUMBER AND SIZE OF EMPLOYING ESTABLISHMENTS IN INDUSTRIAL DIVISIONS AND GROUPS

INDUSTRIAL DIVISIONS AND GROUPS	NUMBER OF WORKERS			NUMBER AND SIZE OF EMPLOYING ESTABLISHMENT				
	TOTAL	Citizens and other Permanent Residents	Temporary Residents	1 - 5 workers	6 - 25 workers	26-100 workers	101-500 workers	over 500 workers
401 Quarrying	67	6	6	2	2	1		5
402 Food, Drink or Tobacco Processing	140	33	107	11	7	1		19
403 Tailoring and Shoemaking	246	57	189	44	10	1		55
404 Manufacturing of Timber Furniture and Fittings	107	22	85	12	6			18
405 Printing and Publishing	177	92	85		2	3		5
406 Bricklaying	64	11	53	2	4			6
407 Manufacture of Metal Articles (other than Precious Metals)	79	20	59	10	5			15

39

Digitized by Google

INDUSTRIAL DIVISIONS AND GROUPS	NUMBER OF WORKERS				NUMBER AND SIZE OF EMPLOYING ESTABLISHMENT				
	TOTAL	Citizens and other Permanent Resident	Temporary Residents	1 - 5 workers	6 - 25 workers	26 - 100 workers	101 - 500 workers	over 500 workers	TOTAL
409 Goldsmiths, Silversmiths and Jewellers	34	18	16	9	1				10
410 Manufacturing Industries not separately Classified	38	14	24	8	1				9
411 ELECTRICITY AND WATER SUPPLY INDUSTRY	779	750	29			1	1	1	2
5 CONSTRUCTION OF ROADS, BUILDINGS AND OTHER CIVIL ENGINEERING WORKS	7,286	2,876	4,420	55	77	17	9	3	157
6 WHOLESALE AND RETAIL TRADING UNDERTAKINGS	1,594	666	928	266	55	5			316

NUMBER OF WORKERS AND NUMBER AND SIZE OF EMPLOYING ESTABLISHMENTS IN INDUSTRIAL DIVISIONS AND GROUPS

INDUSTRIAL DIVISIONS AND GROUPS	NUMBER OF WORKERS			NUMBER AND SIZE OF EMPLOYING ESTABLISHMENT				
	TOTAL	Citizens and other Permanent residents	Temporary Residents	1 - 5 workers	6 - 25 workers	26 - 100 workers	101 - 500 workers	over 500 workers
61 Import and Export Agencies and Wholesale Trading Undertakings	593	317	276	43	13	4		
62 Shops, Stalls, Filling Stations and other Retail Trading Undertakings	1,001	349	652	213	37	1		
								65
								251
63 HOTELS, RESTAURANTS AND COFFEE SHOPS	614	153	461	43	31	4		
63 Hotels	97	27	70		6			
64 Restaurants and Coffee Shops	517	126	391	43	25	4		
								78
								6
								72
7 TRANSPORT, STORAGE AND COMMUNICATIONS	1,063	776	287	26	17	7	2	
								52

NUMBER OF WORKERS AND NUMBER AND SIZE OF EMPLOYING ESTABLISHMENTS IN INDUSTRIAL DIVISIONS AND GROUPS

INDUSTRIAL DIVISIONS AND GROUPS	NUMBER OF WORKERS			NUMBER AND SIZE OF EMPLOYING ESTABLISHMENT					
	TOTAL	Citizens and other Permanent Residents	Temporary Residents	1 - 5 workers	6 - 25 workers	26 - 100 workers	101-500 workers	over 500 workers	TOTAL
71 Land Transport Services	226	99	127	14	12	1			27
72 Sea or River transport and Port operating Services	211	111	100	3	4	3			10
73 Air Transport and Airport Services	114	91	23			2			2
74 Travel Agencies and Packing and Storage Services	118	92	26	9	1	1			11
75 Postal, Telephone and Telegraph Services	394	383	11				2		2
8 FINANCIAL, INSURANCE AND BUSINESS SERVICES	749	541	202	23	13	6	1		43

TABLE I (CONTD)

NUMBER OF WORKERS AND NUMBER AND SIZE OF EMPLOYING ESTABLISHMENTS IN INDUSTRIAL DIVISIONS AND GROUPS

INDUSTRIAL DIVISIONS AND GROUPS	NUMBER OF WORKERS			NUMBER AND SIZE OF EMPLOYING ESTABLISHMENT					
	TOTAL	Citizens and other permanent residents	Temporary Residents	1-5 workers	6-25 workers	26-100 workers	101-500 workers	over 500 workers	TOTAL
81 Banks and other financial Institutions	291	232	59		6	4			10
82 Insurance, Accountancy, Legal and other Business Services including Professional and Trade Associations	49	19	30	12	3				15
83 Engineering, Architectural and Technical Services	409	296	113	11	4	2	1		18
9 COMMUNITY, SOCIAL AND PERSONAL SERVICES	10,133	8,705	1,428	113	57	21	10	4	205
901 Public Administration and Municipal Services	3,958	3,802	156	1	7	8	9	1	26

LABOUR

NUMBER OF WORKERS AND NUMBER AND SIZE OF EMPLOYING ESTABLISHMENTS IN INDUSTRIAL DIVISIONS AND GROUPS

INDUSTRIAL DIVISIONS AND GROUPS	NUMBER OF WORKERS			NUMBERS AND SIZE OF EMPLOYING ESTABLISHMENT					
	TOTAL	Citizens and other Permanent Residents	Temporary Residents	1 - 5 workers	6 - 25 workers	26 - 100 workers	101-500 workers	over 500 workers	TOTAL
02 Educational Training and Instructional Services	2,707	2,302	405	3	2	5		1	11
03 Religious and Welfare Services	1,041	914	127	3	1	1		1	6
04 Medical, Dental and other Health Services	1,043	915	128	13				1	14
05 Recreational and Cultural Services	398	358	40	1	8	2	1		12
06 Repair of Vehicles and Bicycles	403	202	201	23	17	2			42
07 Other Repair Services	318	155	163	28	8	3			39
08 Laundering and Dry Cleaning	91	18	73	4	5				9

LABOUR

NUMBER OF WORKERS AND NUMBER AND SIZE OF EMPLOYING ESTABLISHMENTS IN INDUSTRIAL DIVISIONS AND GROUPS

INDUSTRIAL DIVISIONS AND GROUPS	NUMBER OF WORKERS			NUMBER AND SIZE OF EMPLOYING ESTABLISHMENT					TOTAL
	TOTAL	Citizens and other Permanent Residents	Temporary Residents	1 - 5 workers	6 - 25 workers	26 - 100 workers	101 - 500 workers	over 500 workers	
910 Barbers and Hairdressers	146	32	114	23	9				32
911 Photography and Related Services	28	7	21	14					14
TOTAL ALL INDUSTRIES	27,646	17,540	10,106	659	311	81	25	9	1,065

TABLE 2

PROFESSIONAL, TECHNICAL AND RELATED WORKERS BY MAJOR INDUSTRIAL DIVISIONS

INDUSTRIAL DIVISION	TOTAL (1)	SEX AND AGE GROUP			RESIDENTIAL STATUS		
		(2) Male	(3) Female	(4) Young Persons	(5) Citizens	(6) Permanent Residents	(7) Temporary Residents
Agriculture, Forestry and Fishing.	29	29			18		11
Production of Oil and Natural Gas	749	680	69		64	194	491
Sawmilling and Timber Processing							
Other Mining, Quarrying and Manufacturing.	6	6			2		4
Electricity and Water Supplies	50	50			21	1	28
Construction	178	172	6		38	5	135
Wholesale and Retail Trading	6	6				1	5
Coffee Shops, Restaurants and Hotels							
Transport, Storage and Communications	10	10			7		3
Financial, Insurance and Business Services	225	218	7		101	9	115
Community, Social and Personal Services	3,262	2,340	921	1	2,455	163	644
ALL INDUSTRIES	4,515	3,511	1,003	1	2,706	373	1,436

LABOUR

TABLE 3

ADMINISTRATIVE, EXECUTIVE AND MANAGERIAL WORKERS BY MAJOR INDUSTRIAL DIVISIONS

INDUSTRIAL DIVISIONS	TOTAL (1)	SEX AND AGE GROUP			RESIDENTIAL STATUS		
		(2) Male	(3) Female	(4) Young Persons	(5) Citizens	(6) Permanent Residents	(7) Temporary Residents
Agriculture, Forestry and Fishing	114	113	1		92	8	14
Production of Oil and Natural Gas	21	20	1				21
Sawmilling and Timber Processing	14	13	1		4	7	3
Other Mining, Quarrying and Manufacturing	70	67	3		8	26	36
Electricity and Water Supplies							
Construction	100	100			13	20	67
Wholesale and Retail Trading	228	218	10		35	56	137
Coffee Shops, Hotels and Restaurants	43	38	5		15	16	12
Transport, Storage and Communications	48	48			21	7	20
Financial, Insurance and Business Services	45	45			10	12	23
Community, Social and Personal Services	544	528	16		392	43	109
ALL INDUSTRIES	1,227	1,190	37		590	195	442

LABOUR

TABLE 4

CLERICAL AND RELATED WORKERS BY MAJOR INDUSTRIAL DIVISIONS

INDUSTRIAL DIVISION	TOTAL (1)	SEX AND AGE GROUP			RESIDENTIAL STATUS		
		(2) Male	(3) Female	(4) Young Persons	(5) Citizens	(6) Permanent Residents	(7) Temporary Residents
Agriculture, Forestry and Fishing	42	38	4		32		10
Production of Oil and Natural Gas	387	308	79		56	248	83
Sawmilling and Timber Processing	17	15	2		3	9	5
Other Mining, Quarrying and Manufacturing	58	31	27		18	18	22
Electricity and Water Supplies	41	33	8		40		1
Construction	276	229	47		154	12	110
Wholesale and Retail Trading	306	213	91	2	53	104	149
Coffee Shops, Hotels and Restaurants	26	7	18	1	1	5	20
Transport, Storage and Communications	393	316	77		282	43	68
Financial, Insurance and Business Services	316	196	120		114	144	58
Community, Social and Personal Services	1,136	823	308	5	955	98	83
ALL INDUSTRIES	2,998	2,209	781	8	1,708	681	609

TABLE 5

SALES WORKERS BY MAJOR INDUSTRIAL DIVISIONS

INDUSTRIAL DIVISION	TOTAL (1)	SEX AND AGE GROUP			RESIDENTIAL STATUS		
		(2) Male	(3) Female	(4) Young Persons	(5) Citizens	(6) Permanent Residents	(7) Temporary Residents
Agriculture, Forestry and Fishing	3	3					3
Production of Oil and Natural Gas	1	1			1		
Sawmilling and Timber Processing							
Other Mining, Quarrying and Manufacturing	51	47	4			9	42
Electricity and Water Supplies							
Construction	3	2	1			1	2
Wholesale and Retail Trading	595	488	102	5	62	134	399
Coffee Shops, Restaurants and Hotels	37	34	3		7	6	24
Transport, Storage and Communications	12	10	2		3	2	7
Financial, Insurance and Business Services							
Community, Social and Personal Services	73	65	6	2	6	30	37
ALL INDUSTRIES	775	650	118	7	79	182	514

TABLE 6

SERVICE WORKERS BY MAJOR INDUSTRIAL DIVISIONS

INDUSTRIAL DIVISION	TOTAL (1)	SEX AND AGE GROUP			RESIDENTIAL STATUS		
		(2) Male	(3) Female	(4) Young Persons	(5) Citizens	(6) Permanent Residents	(7) Temporary Residents
Agriculture, Forestry and Fishing	17	14	3		14	1	2
Production of Oil and Natural Gas	130	119	11		53	68	9
Sawmilling and Timber Processing	3	1	2		1		2
Other Mining, Quarrying and Manufacturing	14	4	10			2	12
Electricity and Water Supplies							
Construction	132	74	57	1	85	9	88
Wholesale and Retail Trading	70	32	38		5	6	59
Hotels, Restaurants and Coffee Shops	448	359	87	2	17	64	367
Transport, Storage and Communications	70	60	10		60	1	9
Financial, Insurance and Business Services							
Community, Social and Personal Services	2,477	1,993	483	1	2,172	88	217
ALL INDUSTRIES	3,361	2,656	701	4	2,357	239	765

LABOUR

TABLE 7

AGRICULTURE, ANIMAL HUSBANDRY AND FOREST WORKERS, AND FISHERMEN BY MAJOR INDUSTRIAL DIVISIONS

INDUSTRIAL DIVISION	TOTAL (1)	SEX AND AGE GROUP			RESIDENTIAL STATUS		
		(2) Male	(3) Female	(4) Young Persons	(5) Citizens	(6) Permanent Residents	(7) Temporary Residents
Agriculture, Forestry and Fishing	662	595	67		482	3	177
Production of Oil and Natural Gas							
Sawmilling and Timber Processing	122	122			11	24	87
Other Mining, Quarrying and Manufacturing	4	4			1		3
Electricity and Water Supplies							
Construction							
Wholesale and Retail Trading	38	38			12		26
Coffee Shops, Restaurants and Hotels							
Transport, Storage and Communications							
Financial, Insurance and Business Services							
Community, Social and Personal Services	223	222	1		216	2	5
ALL INDUSTRIES	1,049	981	68		722	29	298

LABOUR

PRODUCTION AND RELATED WORKERS, TRANSPORT EQUIPMENT OPERATORS, AND LABOURERS BY MAJOR INDUSTRIAL GROUP

TABLE 8

INDUSTRIAL DIVISION	TOTAL (1)	SEX AND AGE GROUP			RESIDENTIAL STATUS		
		(2) Male	(3) Female	(4) Young Persons	(5) Citizens	(6) Permanent Residents	(7) Temporary Residents
Agriculture, Forestry and Fishing	46	46			43		3
Production of Oil and Natural Gas	1,796	1,794	2		615	613	368
Sawmilling and Timber Processing	313	310	2	1	84	66	183
Other Mining, Quarrying and Manufacturing	749	570	176	3	74	115	660
Electricity and Water Supplies	688	688			677	11	
Construction	6,607	6,553	41	13	2,304	285	4,018
Wholesale and Retail Trading	351	347	3	1	141	57	153
Hotels, Restaurants and Coffee Shops	60	59	1		13	9	38
Transport, Storage and Communications	530	527	1	2	266	84	180
Financial, Insurance and Business Services	163	162	1		153	4	6
Community, Social and Personal Services	2,418	2,280	115	23	1,791	294	333
ALL INDUSTRIES	13,721	13,336	342	43	6,141	1,538	6,042

TABLE 9

ALL WORKERS BY MAJOR INDUSTRIAL DIVISION

	TOTAL (1)	SEX AND AGE GROUP			RESIDENTIAL STATUS		
		(2) Male	(3) Female	(4) Young Persons	(5) Citizens	(6) Permanent Residents	(7) Temporary Residents
Agriculture, Forestry and Fishing	913	838	75		681	12	220
Production of Oil and Natural Gas	3,084	2,922	162		789	1,123	1,172
Sawmilling and Timber Processing	469	461	7	1	83	106	280
Other Mining, Quarrying and Manufacturing	952	729	220	3	103	170	679
Electricity and Water Supplies	779	771	8		738	12	29
Construction	7,296	7,130	152	14	2,544	332	4,420
Wholesale and Retail Trading	1,594	1,342	244	8	308	358	928
Hotels, Restaurants and Coffee Shops	614	497	114	3	53	100	461
Transport, Storage and Communications	1,063	971	90	2	639	137	287
Financial, Insurance and Business Services	749	621	128		378	169	202
Community, Social and Personal Services	10,133	8,251	1,850	32	7,987	718	1,428
ALL INDUSTRIES	27,646	24,533	3,050	63	14,303	3,237	10,106

LABOUR

TABLE 10

ALL WORKERS BY MAJOR INDUSTRIAL DIVISION AND MAJOR OCCUPATIONAL GROUP

INDUSTRIAL DIVISION	OCCUPATIONAL GROUP						ALL GROUP
	Professional, Technical and Related Workers	Administrative and Managerial Workers	Colierial and Related Workers	Sales Workers	Service Workers	Agriculture, Animal Husbandry and Forestry Workers and Fishermen	Production and Related Workers, Transport Equipment Operators and Labourers
Agriculture, Forestry and Fishing	29	114	42	3	17	662	46
Production of Oil and Natural Gas	749	21	387	1	130		1,796
Sawmilling and Timber Processing		14	17		3	122	313
Other Mining, Quarrying and Manufacturing	6	70	58	51	14	4	952
Electricity and Water Supplies	50		41				688
Construction	178	100	276	3	132		6,607
Wholesale and Retail Trading	6	220	306	595	70	38	351
Coffee Shops, Restaurants and Hotels		43	26	37	448		60
Transport, Storage and Communications	10	48	393	12	70		530
Financial, Insurance and Business Services	225	45	316				163
Community, Social and Personal Services	3,263	544	1,136	74	2,477	233	2,416
ALL INDUSTRIES	4,515	1,227	2,996	775	3,361	3,049	13,721
							27,646

LABOUR

TABLE 11

AVERAGE WAGE RATES, EARNINGS AND HOURS OF WORK

INDUSTRIAL AND MANUAL WORKERS—TIME RATES (MINING, MANUFACTURING AND CONSTRUCTION INDUSTRIES)

	Average Rates per Hour		Average Hours per week		Other Benefits*		
	Wages	Earnings	Normal	Actual	H %	M %	L %
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Loggers	1.28	1.64	48.00	41.05	94	100	-
Sawyers	1.29	1.68	48.00	42.20	91	100	45
Turners/Machinists	1.91	2.17	48.50	52.20	27	73	53
Fitters/Mechanics	1.79	2.12	47.15	51.00	53	93	37
Electricians/Wiremen	1.66	1.89	47.00	51.70	81	91	23
Plumbers/Pipefitters	1.49	1.56	51.00	51.50	45	82	-
Welders	2.02	2.53	45.50	52.00	76	62	56
Printers/compositors	1.64	1.98	47.40	50.50	46	100	100
Painters/Decorators	1.52	1.85	49.75	50.00	55	66	18
Bricklayers/Masons	1.71	1.94	52.00	54.90	30	78	18
Carpenters/Joiners	2.20	2.33	47.25	54.50	49	71	15
Steelbenders	1.74	1.90	49.00	50.50	79	100	18
Stationary Engine Operators	1.74	1.93	46.00	49.40	47	48	28
Crane/Hoist Operators	1.86	2.19	45.60	52.70	52	76	58
Tractor/Bulldozer Drivers	1.80	2.71	45.60	57.20	39	100	8
Launch/Boat Crews	1.47	1.76	48.00	60.00	91	100	100
Motor Vehicle Drivers	1.49	1.67	47.00	52.00	47	96	31
Labours/Apprentices	0.97	1.15	47.10	50.30	60	82	29
All Workers	1.39	1.68	47.00	50.20	64	82	28

*The figures in columns (5) and (6) represent the percentages of workers covered by the returns whose employers provide housing and medical attention when required, either free of charge or at subsidised rates. Those in column (7) represent the percentage receiving paid leave of not less than ten days per year, exclusive of days prescribed under the Labour Enactment as holidays for workers and of other public holidays.

LABOUR

TABLE 13

AVERAGE WAGE RATES EARNINGS AND HOURS OF WORK

INDUSTRIAL AND MANUAL WORKERS—MONTHLY RATES

(MINING, MANUFACTURING AND CONSTRUCTION INDUSTRIES)

Occupation	Average Rates per Hour		Average Hours per Week		Other Benefits*		
	(1)	(2)	(3)	(4)	B (5)	M (6)	L (7)
Sawyers	1.77	1.80	48.00	44.25	100	100	100
Turners/Machinists	1.92	2.18	48.70	52.50	57	57	43
Fitters/Mechanics	1.96	2.18	47.25	49.50	56	97	88
Electricians/Wiremen	1.66	2.02	46.20	48.00	85	95	29
Welders	2.11	2.50	45.00	48.00	74	88	97
Printers/Compositors	1.60	1.94	47.60	49.50	35	100	100
Painters/Decorators	1.97	2.12	44.50	46.50	92	100	67
Carpenters/Joiners	2.11	2.32	43.20	45.80	100	100	100
Steelbenders	2.14	2.48	42.80	43.50	100	100	66
Stationary Engine Operators	1.67	2.06	45.00	47.30	96	100	86
Crane/Boiler Operators	1.94	2.32	45.00	53.50	56	70	62
Tractor/Bulldozer Drivers	2.20	2.80	46.00	57.20	54	100	54
Launch/Boat Crews	1.47	1.76	48.00	60.00	91	100	100
Motor Vehicle Drivers	1.56	1.88	46.00	49.50	48	92	76
Labourers/Apprentices	0.99	1.12	44.70	46.30	33	89	77
All Workers	1.54	1.82	45.25	49.60	71	87	75

*The figures in columns (5) and (6) represent the percentages of workers covered by the returns whose employers provide housing and medical attention when required, either free of charge or subsidised rates. Those in column (7) represent the percentage receiving paid leave of not less than ten days per year, exclusive of days prescribed under the Labour Enactment as holidays for workers and of other public holidays.

LABOUR

TABLE 3

ADMINISTRATIVE, EXECUTIVE AND MANAGERIAL WORKERS BY MAJOR INDUSTRIAL DIVISIONS							
INDUSTRIAL DIVISIONS	TOTAL (1)	SEX AND AGE GROUP		RESIDENTIAL STATUS			
		(2) Male	(3) Female	(4) Young Persons	(5) Citizens	(6) Permanent Residents	(7) Temporary Residents
Agriculture, Forestry and Fishing	114	113	1		92	8	14
Production of Oil and Natural Gas	21	20	1				21
Sawmilling and Timber Processing	14	13	1		4	7	3
Other Mining, Quarrying and Manufacturing	70	67	3		8	26	36
Electricity and Water Supplies							
Construction	100	100			13	20	67
Wholesale and Retail Trading	228	218	10		35	56	137
Coffee Shops, Hotels and					15	16	19

TABLE 11

INDUSTRIAL AND MANUAL WORKERS—TIME RATES (MINING, MANUFACTURING AND CONSTRUCTION INDUSTRIES)

	Average Rate per hour		Average Hours per week		Other Benefit		
	Wages		Normal		W	M	%
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Leggers	1.20	1.84	48.00	47.05	96	100	
Scapers	1.20	1.80	48.00	47.20	92	100	44
Timbers/Truckmen	1.00	1.17	48.00	52.20	97	70	10
Flowers/Truckmen	1.70	2.13	47.15	51.00	53	92	10
Electricians/Women	1.00	1.09	47.00	51.70	81	91	30
Plumbers/Truckmen	1.40	1.70	52.00	51.50	43	82	-
Welders	1.00	1.20	45.50	52.00	76	92	50
Painters/Scrapers	1.00	1.00	47.40	50.50	66	100	100
Painters/Decorators	1.00	1.05	48.75	50.00	55	66	70
Painters/Decorators	1.70	2.00	52.00	50.00	30	75	10
Boiler-makers/Women	1.20	1.20	47.25	54.50	49	71	10
Carpenters/Women	1.70	2.00	48.00	50.50	79	100	10
Assemblers	1.70	2.02	48.00	49.40	47	64	20
Machinists/Digital Operators	1.00	1.10	46.00	50.70	52	76	70
Cross-Rail Operators	1.00	1.70	46.00	57.20	29	100	1
Transfer/Railroad Drivers	1.40	2.70	48.00	60.00	81	100	100
General/Rail Crews	1.40	2.07	47.00	50.00	47	85	10
Motor Vehicle Drivers	0.97	1.13	47.10	50.10	60	92	30
Labors/Operators	1.20	1.40	47.00	50.10	64	91	10

The figures in columns (2) and (4) represent the percentages of workers covered by the schemes whose employers provide housing and medical attention when required, either free of charge or at subsidised rates. Those in column (3) represent the percentage remaining paid for at not less than two days per year, exclusive of days prescribed under the Labour Statutes as holidays for workers not of other public holidays.

TABLE 4

INDUSTRIAL DIVISION	TOTAL (1)	SEX AND AGE GROUP (3)		RESIDENTIAL STATUS	
		(2) Male	(3) Female	(4) Citizens	(5) Foreign Resident
Agriculture, Forestry and Fishing	4.22	2.09	4	3.2	1.0
Production of Oil and Natural Gas	20.7	10.09	7.0	0.6	0.1
Sawmilling and Timber Processing	3.7	3.5	2	3	0
Meat Packing, Slaughtering and Meat Processing	0.6	0.3	1.7	1.0	1.0
Textile, Apparel and Wearing Appointments	4.1	2.13	1.9	4.0	3.0
Chemical and Allied Products	17.0	12.09	4.7	1.5-4	3.0-5
Wholesale and Retail Trade	23.5	23.5	0.3	0.3	0.3
Food, Drink and Tobacco	10.0	5	5	5	5
Transportation, Communication and Public Utilities	10.0	10.0	0	10.0	10.0
Construction	10.0	10.0	0	10.0	10.0
Other	10.0	10.0	0	10.0	10.0
Total	100.0	100.0	100.0	100.0	100.0

IGS AND HOURS OF WORK

WORKERS—MONTHLY RATES

) CONSTRUCTION INDUSTRIES)

Average Rates per Hour Wages Earnings		Average Hours per Week Normal Actual		Other Benefits*		
(1)	(2)	(3)	(4)	H	M	L
1.77	1.80	48.00	44.25	100	100	100
1.92	2.18	48.70	52.50	57	57	43
1.96	2.18	47.25	49.50	58	97	88
1.86	2.02	46.20	48.00	85	95	29
2.11	2.50	45.00	48.00	74	33	97
1.60	1.94	47.60	49.50	35	100	100
1.97	2.12	44.50	46.50	92	100	67
2.11	2.32	43.20	45.80	100	100	100
2.14	2.46	42.80	43.50	100	100	86
1.87	2.06	45.00	47.30	98	100	50
1.94	2.33	45.00	53.50	56	70	62
2.20	2.80	46.00	57.30	54	100	54
1.47	1.76	48.00	60.00	91	100	100
1.58	1.88	46.00	49.50	48	92	76
0.99	1.13	44.70	46.30	33	89	77
1.54	1.83	45.25	49.60	71	87	75

as (5) and (6) represent the percentages of workers whose employers provide housing and medical aid, either free of charge or subsidised rates. (7) represents the percentage receiving paid leave of not less than 14 days per year, exclusive of days prescribed under the holidays for workers and of other public holidays.

LABOUR

TABLE 13

AVERAGE WAGE RATES, EARNINGS AND HOURS OF WORK

INDUSTRIAL AND MANUAL WORKERS— DAILY HOURLY RATES (MINING, MANUFACTURING AND CONSTRUCTION INDUSTRIES)

Occupation	Average Rates per Hour		Average Hours per Week		Fringe Benefits*		
	Wages	Earnings	Normal	Actual	H %	M %	L %
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Loggers	1.28	1.64	48.00	41.05	94	100	-
Sawyers	1.16	1.51	48.00	40.90	91	100	43
Turners/Machinists	1.90	2.16	48.00	52.00	-	88	63
Fitters/Mechanics	1.72	2.10	47.10	53.60	46	61	3
Electricians/Wiremen	1.46	1.75	48.00	53.00	76	83	13
Plumbers/Pipe fitters	1.49	1.56	51.00	51.50	45	82	-
Welders	1.94	2.57	48.25	57.00	80	43	-
Printers/Compositors	1.72	2.14	47.00	53.30	100	100	100
Painters/Decorators	1.30	1.36	50.60	52.75	40	86	5
Bricklayers/Masons	1.71	1.74	52.00	54.90	30	75	18
Carpenters/Joiners	2.22	2.36	46.60	55.00	46	69	9
Steelbenders	1.41	1.67	52.00	54.00	73	100	-
Stationary Engine Operators	1.48	1.78	48.00	50.50	-	-	-
Crane/Hoist Operators	1.64	1.97	45.71	51.00	43	43	-
Tractor/Bulldozer Drivers	1.57	2.63	45.50	57.60	36	100	-
Motor Vehicle Drivers	1.40	1.45	48.00	53.50	51	97	-
Labourers/Apprentices	0.96	1.58	48.20	52.30	61	80	2
All Workers	1.25	1.56	48.20	52.30	61	84	44

*The figures in columns (5) and (6) represent the percentage of workers covered by the returns whose employers provide housing and medical attention when required, either free of charge or at subsidised rates. Those in column (7) represent the percentage receiving paid leave of not less than ten days per year, exclusive of days prescribed under the Labour Enactment as holidays for manual workers and of other public holidays.

LABOUR

TABLE 14

AVERAGE WAGE RATES, EARNINGS AND HOURS OF WORK
CLERICAL, DISTRIBUTIVE AND SERVICE WORKERS - MEN AND WOMEN (ALL INDUSTRIES)

Occupation	Average Rates per Hour		Average Hours per Week		Other Benefits		
	Wages	Earnings	Normal	Actual	H %	M %	L %
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Clerks	1.54	1.74	42.80	44.50	18	78	83
Stenographers	2.85	3.20	41.80	42.20	50	95	90
Bookkeepers/Cashiers	1.96	2.16	44.50	45.70	15	81	53
Typists	1.68	1.88	42.70	44.00	16	93	82
Salesmen/shop Assistants	1.17	1.46	48.20	51.40	39	66	50
Cooks/Kitchen Assistants	1.94	1.53	61.75	64.25	76	95	56
Waiters/Bartenders	1.02	1.20	51.75	52.75	86	93	60
Amahs	0.79	1.02	52.00	52.00	70	85	65
Laundrerers/Dry Cleaners	1.24	1.26	45.60	46.00	98	100	2
Barbers/Hairdressers	1.06	1.00	55.00	54.50	72	72	-
Tailors/Dressmakers	1.02	1.02	47.52	47.52	69	97	-
All Workers	1.42	1.61	45.20	47.30	41	82	47

*The figures in columns (5) and (6) represent the percentages of Workers covered by the returns whose employers provide housing and medical attention when required, either free of charge or at subsidised rates. Those in column (7) represent the percentage receiving paid leave of not less than ten days per year, exclusive of public holidays.

LABOUR

TABLE 16

AVERAGE WAGE RATES, EARNINGS AND HOURS OF WORK CLERICAL, DISTRIBUTIVE AND SERVICE WORKERS—MEN (ALL INDUSTRIES)

Occupation	Average Rates per Hour		Average Hours per Week		Other Benefits*		
	Wages	Earnings	Normal	Actual	H	M	L
	\$ (1)	\$ (2)	(3)	(4)	% (5)	% (6)	% (7)
Clerks	1.59	1.84	42.50	44.50	21	76	63
Bookkeepers/Cashiers	2.10	2.32	45.00	46.40	15	82	73
Salesmen/Shop Assistants	1.26	1.57	48.30	51.70	44	65	49
Cooks/Kitchen Assistants	1.52	1.72	60.50	62.80	97	97	70
Waiters/Bartenders	0.99	1.15	50.80	52.20	82	93	64
Launderers/Dry Cleaners	1.30	1.31	45.80	46.60	100	100	14
Barbers/Hairdressers	1.37	1.44	47.20	47.20	100	100	-
Tailors/Dressmakers	1.06	1.06	47.50	47.50	66	96	-
All Workers	1.45	1.65	45.50	47.50	49	81	44

*The figures in columns (5) and (6) represent the percentages of workers covered by the returns whose employers provide housing and medical attention when required, either free of charge or at subsidised rates. Those in column (7) represent the percentage receiving paid leave of not less than ten days per year, exclusive of public holidays.

LABOUR

TABLE 16

AVERAGE WAGE RATES, EARNINGS AND HOURS OF WORK

CLERICAL, DISTRIBUTIVE AND SERVICE WORKERS—WOMEN (ALL INDUSTRIES)

Occupation	Average Rates per Hour		Average Hours per Week		Other Benefits*		
	Wages	Earnings	Normal	Actual	H %	M %	L %
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Clerks	1.48	1.58	42.30	44.30	14	81	64
Stenographers	2.85	3.20	41.80	42.20	50	95	90
Bookkeepers/Cashiers	1.62	1.77	43.50	45.60	14	79	7
Typists	1.68	1.88	42.70	44.00	16	93	82
Salemen/Shop Assistants	0.69	0.87	47.40	51.20	14	71	57
Cooks/Kitchen Assistants	0.87	1.20	61.20	64.70	18	92	18
Waiters/Bartenders	1.07	1.30	53.50	53.50	93	93	53
Amaha	0.79	1.02	52.00	52.00	70	85	65
Laundresses/Dry Cleaners	0.98	1.01	44.57	43.51	86	100	-
Barbers/Hairdressers	0.82	0.83	63.50	61.60	43	43	-
Tailors/Dressmakers	0.59	0.59	48.00	48.00	88	88	-
All Workers	1.30	1.50	44.25	45.30	31	83	55

*The figures in columns (5) and (6) represent the percentages of workers covered by returns whose employers provide housing and medical attention when required, either free of charge or at subsidised rates. Those in column (7) represent the percentage receiving paid leave of not less than ten days per year, exclusive of public holidays.

LABOUR

TABLE 17

INSPECTION OF PLACES OF EMPLOYMENT

Industrial Group

Number and sizes of places of employment:-

(a) Liable to inspection under the
Labour Enactment; and

(b) Inspected in 1972.

		1 - 5 workers	6 - 25 workers	26 -100 workers	101 - 500 workers	over 500 workers	Total
Agriculture, Forestry and Fishing	(a)	44	10	4	2		60
	(b)	8	8				16
Production of Oil and Natural Gas	(a)	3	2	3		1	9
	(b)	1	1				2
Sawmilling and Timber Processing	(a)	2	11	7			20
	(b)	2	9	3			14
Mining, Quarrying and Manufacturing	(a)	96	38	6			142
	(b)	9	11				20
Electricity and Water Supply	(a)			1	1	1	3
	(b)						
Building and Construction	(a)	51	77	17	9	3	157
	(b)	24	68	11	3	1	107
Wholesale and Retail Distributive Undertakings	(a)	78	10	2			90
	(b)	36	4				40
Hotels, Restaurants and Coffee Shops	(a)	43	31	4			78
	(b)	6	18	1			25
Transport, Storage and Communications	(a)	26	17	7	2		52
	(b)	2	3				5
Services	(a)	113	57	10	6		186
	(b)	89	42	2			133
All Groups	(a)	458	253	61	20	5	797
	(b)	177	164	17	3	1	362

LABOUR

TABLE 18

Distribution by Industry of Accidents resulting in Death or Permanent Disablement, Compensation Paid and Degree of Disablement.

Industry	Persons employed	Accidents reported	Persons Killed								Persons Permanently Disabled					
			Total	Compensated	Others*	Compensation paid	Total	Compensated	Others*	Compensation paid	Degree of Disablement					
											100%	51-99%	21-50%	10-20 %	Under 10%	
Sawmilling and Timber Processing	469	3	2	1	1	1,872	1	1		960			1			
Mining, Quarrying and Manufacturing	1,036	2					2	2		576					2	5
Construction	7,296	16	5	3	2	21,600	11	10	1	10,361	1			5		
Transport Storage and Communications	1,063	1					1	1		1,920			1			
Distributive and Service Industries	13,090	2					2	1	1	384					2	
ALL INDUSTRIES	25,954	24	7	4	3	23,472	17	15	2	14,201	1		7		9	

*In these cases compensation was not claimed or had not been finally settled by the end of the year.

LABOUR

TABLE 19

Analysis by Cause of Accidents resulting in Death or Permanent Disablement, Compensation Paid and Degree of Disablement

Cause	Persons Killed				Persons Permanently Disabled						
	Total	Compensated	Not Workmen	Others*	% Compensation paid	Total	Compensated	Not Workmen	Others*	% Compensation Paid	Degree of Disablement
	Accidents reported										
Power-driven Machinery - Prime Mover	1					1	1			1,440	1
Power-driven Machinery - Other	3					3	3			3,264	2
Other Machinery - Lifting	1					1			1		1
Land Transport - Operated by person injured	2	1		1		1	1			1,920	1
Land Transport - Not operated by person injured	1	1		1							
Handling objects other than tools	4					4	4			1,248	4
Struck by falling or moving object	6	2	2		9,072	4	3	1	1	2,239	3
Person falling	2	1	1		7,200	1	1			730	1
Fire or explosion	1					1	1			2,880	1
Electric Shock	1	1			7,200						
Cause not known	2	1		1		1	1			480	
ALL CAUSES	24	7	4	3	23,472	17	15	2	2	14,201	7
											9

* In these cases compensation was not claimed or had not been finally settled the end of the year.

TABLE 20

Distribution by Industry of Accidents resulting in Temporary Total Disablement, Duration of Disablement, Compensation Payments and Man-days Lost

Industry	Persons employed	Accidents Reported	Persons disabled and duration of disablement					Payments while disabled				Man - days Lost		
			Total	Over 3-6 mths	1-3 mths	17-30 days	5-16 days	not yet known	Paid compensation	Paid Normal wages	Not a workman	Others*	Total compensation paid	Total
Sawmilling and Timber Processing	469	8	8	1	3	1	2	1	4	3		1	1,492	435
Mining, Quarrying and Manufacturing	4,036	14	14	2	1	3	5	3	8	3	1	2	518	343
Construction	7,296	58	59	1	3	9	13	26	30	23		6	5,098	1,678
Transport, Storage and Communications	1,063	6	6		1	1	3	1	1	3		2	97	160
Distributive and Service Industries	13,090	9	10	1	2		3	4	4	5		1	1,562	380
ALL INDUSTRIES	25,954	95	97	3	5	16	18	39	17	37	1	12	8,767	2,996

*In these cases compensation was not claimed or had not been finally settled by the end of the year.

TABLE 21

Analysis by Cause of Accidents Resulting in Temporary Total Disablement, Duration of Disablement, Compensation Payments and Man-days Lost

Cause	Accidents reported	Persons disabled and duration of disablement								Payments while disabled			Man - days Lost		
		Over 6 mths	3-6 mths	1-3 mths	17-30 days	5-16 days	not yet known	Paid compensation	Paid normal wages	Not a workman	Others*	Total compensation paid	with compensation	with pay	Total
Power-driven Machinery-Prime Mover	3	3			2	1		2	1			116	31	18	49
Power-driven Machinery-Lifting	1	1			1				1					25	25
Power-driven Machinery-Other	5	5		2		2	1	3	1		1	394	84	6	87
Other Machinery-Lifting	2	2		1	1			1	1			138	33	21	54
Other Machinery-Other	1	1				1			1					6	6
Land Transport - Operated by person injured	2	2		2					1		1		161		161
Land Transport - Not operated by person injured	4	5				4	1	2	2		1	60	15	21	36
Water Transport-Operated by person injured	1	1				1			1					9	9
Hand Tools-In hand of person injured	6	6		1	1	4		6				296	94		94

LABOUR

TABLE 21 (contd)

Analysis by Cause of Accident Resulting in Temporary Total Disablement, Duration of Disablement, Compensation Payments and Man-days Lost

	Accidents reported	Persons disabled and duration of disablement							Payments while disabled				Total compensation paid	Man - days Lost		
		Total	Over 6 mths	3-6 mths	1-3 mths	17-30 days	5-16 days	not yet known	Paid compensation	Paid normal Wages	Not a workman	Others*		with compensation	with pay	Total
Handling objects other than tools Struck by falling or moving object Person falling Fire or explosion Hot, poisonous or corrosive substance Other Causes Cause not known	18	19		1	2	5	9	2	14	4		1	1,717	261	114	375
	26	26	2		5	3	9	7	10	11	1	4	2,327	463	424	887
	13	13	1	2	2	1	3	4	5	5		3	3,585	397	396	793
	4	4		1		1	1	1		3		1			163	163
	4	4				2	2		3	1			134	38	25	63
	1	1					1			1					10	10
	4	4		1	1	1	1		1	3				92	92	184
ALL CAUSES	95	97	3	5	16	18	39	16	47	37	1	12	8,767	1,508	1,488	2,996

*In these cases compensation was not claimed or had not been finally settled by the end of the year.

TABLE 23

Analysis by Occupation of Persons Killed or Disabled by Industrial Accidents

Occupation	Number of persons killed or injured	Deaths	Permanent Disablement					Temporary Total Disablement					
			100%	51-99%	21-50%	10-20%	less than 10%	over 6 mths	3-6 mths	1-3 mths	17-30 days	5-16 days	duration unknown
Aircraft and Ships' Officers	1												1
Loggers and other Timber Workers	2	1											1
Production Supervisors and Foremen	5	1							1		1	2	
Sawmill Operatives and other Timber Processing Workers	3	1				1*		1		1*			
Beverage and Tobacco Processing Workers	1						1*				1		
Machine-Tool Operators (other than Woodworking Machine Tools)	1										1		
Machinery Fitters and Machine Assemblers	16			1*		1*	1*		3	1	5	8	

LABOUR

TABLE 22 (contd)

Occupation	Number of persons killed or injured	Deaths	Permanent Disablement					Temporary Total Disablement					
			100%	51-99 %	21-50%	10-20%	less than 10%	over 6 mths	3-6 mths	1-3 mths	17-30 days	5-16 days	duration unknown
Plant and Machinery (other than Electrical Plant and Machinery Mechanics not separately classified)	1												
Oilers and Greasers	3											1	
Welders and Flame Cutters	3								1	1		3	1
Tinsmiths, Panel Beaters and other Sheet Metal Workers	1											1	
Structural Metal (other than Concrete Reinforcement) Riggers and Erectors	1											1	
Bricklayers, Masons and Tilers												1	
Constructional Carpenters and Joiners	10					1*	1*			2	3	2	3
Construction Workers not separately classified	2											1	1

LABOUR

TABLE 22 (contd)

Occupation	Number of persons killed or injured	Deaths	Permanent Disablement					Temporary Total Disablement					
			100%	51-99%	21-50%	10-20%	less	over 6 mths than 10%	3-6 mths	1-3 mths	17-30 days	5-16 days	duration unknown
Stationary Engine and Related Equipment Operators	2	1										1	
Stevedores, Freight Handlers, Drivers and other Material Handling and Related Equipment Operators	2											2	
Tractor Drivers and other Earth Moving Machinery and Related Equipment Operators	2								1			1	
Ships' Deck and Engine-room Ratings, Launch and Boat Crews	4						1*	1*	2			2	
Motor Vehicle Drivers and other Land Transport Equipment Operators	6						1*		3	1	2		
Unskilled General Labourers	38	3					2*	5*	2	1	5	13	9
ALL OCCUPATIONS	104	7		1*			7*	9*	3	5	16	39	16

*In each case permanent disablement was preceded by a period of temporary total disablement.

TABLE 23

Analysis of Industrial Injuries by Nature and Location

Nature	Location (where known or applicable)														
	Head			Upper extremities			Trunk			Lower extremities			Multiple	Unspecified	TOTAL
	Eye	Ear	Other	Upper arm	Forearm or wrist	Hand or fingers	Spine	Internal organs	Other =	Upper leg	Lower leg or ankle	Foot or Toes			
Contusions, Cuts or Abrasions	2		4			11			2	1	2	4	3	1	30
						6									6
	1	2	4		3	17	1	1		4	8	7	3		51
						1					1				2
						4				1	3		1	1	10
Asphyxiation or Drowning														1	1
Electric Shock														1	1
Other or unspecified			1						1					1	3
ALL INJURIES	3	2	9		3	39	1	1	3	6	14	11	7	5	104

CHAPTER 5

PUBLIC FINANCE AND TAXATION

PART 1-PUBLIC FINANCE

There has been no change in the system of accounting for public moneys since the last report.

REVENUE

There was an increase of \$47,591,475.00 in the total revenue received as compared with 1971. Details are shown hereunder.

PART 1-PUBLIC FINANCE

Table 1-REVENUE

<u>CLASS I</u>	<u>1970</u> \$	<u>1971</u> \$	<u>1972</u> \$
Duties	8,889,930	9,060,860	10,090,795
Taxes	92,129,689	104,831,783	122,613,070
Licences	757,611	886,442	922,443
<u>CLASS II</u>			
Fees of Courts or Office	259,168	321,583	335,132
<u>CLASS III</u>			
Broadcasting & Information	17,868	19,189	18,583
Civil Aviation	133,179	154,077	140,142
Customs	469,509	442,062	429,261
Education	34,568	64,790	69,510
Electrical	4,533,259	5,370,849	6,473,471
Language & Literature Bureau	40,120	25,617	21,663
Marine	151,639	170,433	142,250
Medical & Health	79,026	86,507	80,364
Municipal	453,545	381,545	908,800
Museum	-	-	12,450

PUBLIC FINANCE AND TAXATION

Posts	906,515	1,093,312	1,224,804
Prisons	4,491	4,579	4,770
Public Utilities	439,364	512,261	520,912
Public Works	298,870	396,274	377,515
Religious Affairs	-	-	8,034
Resettlement	10,950	24,890	11,175
Telecommunications	2,089,673	2,863,168	3,318,423
CLASS IV			
Royalties, Rents, etc.	35,533,026	39,427,396	50,728,263
Interest, Currency, etc.	38,258,508	37,617,769	57,407,723
Land	123,630	153,514	163,177
Miscellaneous Receipts	1,160,731	5,100,169	579,814
<hr/>			
TOTAL	186,774,869	209,011,069	256,602,544

EXPENDITURE

The total of Charged and Supply Expenditure increased by \$9,391,309 as compared with the previous year.

TABLE II CHARGED EXPENDITURE

	<u>1970</u> \$	<u>1971</u> \$	<u>1972</u> \$
Civil List	1,652,670	1,695,032	2,616,800
H.E. The High Commissioner	354,523	372,492	-
Election Commission	42,920	35,315	-
Pensions, Retiring Allowances and Gratuities	4,573,164	4,396,479	4,990,199
Public Service Commission	86,400	86,181	106,200

PUBLIC FINANCE AND TAXATION

Auditor-General	32,640	34,040	36,840
Treasury	327,674	237,386	1,091,283
Supreme Court	17,015	52,961	36,555
Councils of State	257,797	195,735	125,280
	7,344,803	7,105,619	9,003,157

TABLE III - SUPPLY EXPENDITURE

	<u>1970</u>	<u>1971</u>	<u>1972</u>
	\$	\$	\$
Councils of State	231,425	174,685	187,044
Chief Minister & State Secretariat	1,959,054	2,338,992	2,001,330
Adat Istiadat	517,768	597,553	848,820
Agriculture	2,034,400	2,337,636	2,175,037
Audit	145,996	158,912	168,436
Broadcasting & Information	1,843,728	1,920,612	2,119,815
Royal Brunei Malay Regiment	22,275,187	30,117,187	29,169,335
Civil Aviation	437,389	652,743	780,116
Customs	983,632	961,786	1,021,716
Development Secretariat	143,842	149,037	113,408
District and Land Offices	2,877,523	2,668,424	2,694,369
Education	19,386,522	22,812,340	25,941,612
Elections	95,266	50,723	-
Electrical	6,550,988	7,210,923	7,189,030
Establishment	-	-	207,660
Fisheries	212,153	307,728	441,970
Fire Services	787,739	873,727	950,522
Forests	402,145	437,782	522,918
Geological Survey	93,276	85,972	139,791

PUBLIC FINANCE AND TAXATION

Religious (Hal-Ehwal Ugama)	4,940,021	5,151,376	5,918,504
Immigration & National Registration	559,423	626,067	678,771
Judicial	194,280	183,336	189,604
Labour	154,223	169,113	172,607
Lands	408,592	470,011	520,928
Land Transport	217,853	235,583	239,792
Language & Literature Bureau	606,022	620,396	631,752
Legal	141,711	141,782	150,578
Marine	878,116	853,253	876,548
Medical & Health	7,019,781	7,668,808	8,384,844
Miscellaneous Services	15,724,502	27,913,571	26,698,588
Municipal	2,499,400	2,739,830	2,930,319
Museum	382,247	484,496	382,863
Police	6,204,225	7,897,287	8,771,887
Postal Services	905,326	1,075,146	1,121,897
Prisons	734,925	756,640	763,118
Public Service Commission	73,511	81,924	134,501
Public Works	12,144,881	12,834,485	15,198,878
Resettlement	83,934	107,030	120,021
State Stores and Supplies	555,546	586,564	584,230
State Welfare	319,046	332,644	372,526
Survey	1,207,502	1,285,924	1,260,285
Telecommunications	2,431,988	2,204,288	2,812,613
Town & Country Planning	-	-	77,824
Treasury	587,115	602,604	705,306
	119,952,203	148,877,942	156,371,713

PUBLIC FINANCE AND TAXATION

TABLE IV - COST OF ADMINISTRATING THE STATE

<u>CHARGED EXPENDITURE</u>	<u>1970</u> \$	<u>1971</u> \$	<u>1972</u> \$
Personal Emoluments	1,648,351	1,700,464	2,789,047
Other Charges Annually Recurrent	5,679,878	5,387,921	6,214,110
Other Charges Social Expenditure	16,574	17,234	-
 <u>SUPPLY EXPENDITURE</u>			
Personal Emoluments	42,894,290	47,530,569	55,831,548
Other Charges Annually Recurrent	59,431,994	66,095,047	77,103,632
Other Charges Special Expenditure	17,625,919	35,252,326	23,436,533
	<hr/> 127,297,006	<hr/> 155,983,561	<hr/> 165,374,870 <hr/>

Annual Surplus

Revenue for the year exceeded Expenditure by \$91,227,674. A comparative table showing the surplus for the year 1970 to 1971 is given a Table V.

TABLE V - ANNUAL SURPLUS

	<u>1970</u> \$	<u>1971</u> \$	<u>1972</u> \$
Revenue	186,774,869	209,011,069	256,602,544
Cost of Administration	127,297,006	155,983,561	165,374,870
	<hr/> 59,477,863	<hr/> 53,027,509	<hr/> 91,227,674 <hr/>

PUBLIC FINANCE AND TAXATION

Development Fund

The sum of \$42,000,000.00 was appropriated from the Consolidated Revenue Account during the year. The Development Fund Account for the year is as follows:-

Balance as at 1st January, 1972	\$39,685,504
Appropriation from Consolidated Revenue Account	42,000,000
	<hr/> 81,685,504
Expenditure for 1972	<hr/> 50,954,871
	<hr/>
Balance c/f to 1st January 1973	<hr/> 30,730,633 <hr/>

Development Expenditure for the year with comparative figures for 1970 and 1971 are given in Table VI below

Development Expenditure for the year with comparative figures for 1970 and 1971 are given in Table VI below:-

TABLE VI-DEVELOPMENT EXPENDITURE

	<u>1970</u>	<u>1971</u>	<u>1972</u>
	\$	\$	\$
A OLD PROGRAMME			
57. Education	19,479	-	-
62. Municipal, Belait & Seria	37,601	2,053	-
66. Public Works	205,205	143,175	117,083
67. Water Supplies	30,233	10,663	-
69. Service Housing	667,820	381,426	50,974
B NEW PROGRAMME			
101. Administration	150,608	43,740	2,676
102. Religious Affairs	1,712,758	505,554	126,456
103. Agriculture	144,899	278,095	102,026
104. Broadcasting	33,596	26,847	4,075
105A. Development Office	153,511	41,545	18,861
105B. Civil Aviation	8,129,468	14,224,566	16,126,716
106. Education	15,484,331	5,356,310	1,799,285
107. Electrical	1,477,453	9,997,567	705,482

PUBLIC FINANCE AND TAXATION

107A. Forests	99,846	61,030	36,007
108. Marine	11,333,198	5,899,312	6,760,403
109. Medical & Health	3,010,435	4,046,794	1,586,671
110. Municipal, Brunei	44,368	36,136	206,724
111. Municipal, Belait	166,299	123,004	53,282
112. Municipal, Tutong	5,335	136,807	204,372
113A. District Office, Tutong	427,290	39,118	6,220
114. Police	609,513	1,279,421	4,267,637
114A. Prisons	39,993	1,731	-
115. Public Works	29,367,413	28,367,740	16,583,849
116. State Stores	12,718	-	-
117. Telecommunications	2,014,446	2,412,462	1,997,678
118. District Office, Belait	102,566	-	-
119. District Office, Temburong	2,050	11,043	144,824
120. District Office, Brunei	79,697	77,230	7,799
121. Land Transport	4,803	-	-
122. Survey	2,522	65,226	-
123. Kampong Improvement	2,739	-	-
125. Welfare	5,606	6,800	-
126. Fire Services	78,624	20,775	661
128. Museum	1,465,337	329,450	44,473
129. Fisheries	24,826	8,437	637
130. Postal Services	-	-	-
TOTAL	77,146,586	73,934,057	50,954,871

PUBLIC FINANCE AND TAXATION

Statement of Assets and Liabilities

ASSETS

	<u>1970</u> ₹	<u>1971</u> ₹	<u>1972</u> ₹
Cash	4,337,861	1,235,111	12,906,439
Investments:-			
Sterling Trustee Stocks	618,873,543	603,757,800	569,805,752
Joint Consolidated Fund	19,182,857	3,825,062	17,637,671
Other Investments	34,068,761	46,712,658	48,137,810
Fixed Deposits	22,040,816	29,387,600	38,005,801
	<u>698,503,838</u>	<u>684,918,231</u>	<u>686,493,473</u>

LIABILITIES

Consolidated Revenue Account	612,846,727	617,018,554	629,258,822
Consolidated Trust Account:-			
Development Fund	59,619,561	39,685,504	30,730,633
Government Trust Fund	22,352,143	28,645,266	22,503,405
Civil List Reserve Fund	1,194,729	1,043,269	910,332
Other Funds	2,490,678	3,525,638	3,090,281
	<u>698,503,838</u>	<u>684,918,231</u>	<u>686,493,473</u>

PUBLIC FINANCE AND TAXATION

PART II

DUTIES AND TAXES

Duties;

Export Duties:

These duties are levied on certain products including rubber, copra, sago, livestock, and coconut and palm oils. The total amount collected in 1972 was \$55,460.66.

Import Duties

These duties are levied on a variety of commodities, the principal of which are intoxicating liquors, tobacco, sugar, petroleum products, textiles and vehicles. The total collection in 1972 amounted to \$10,002,129.41.

Excise Duty:

This duty is levied on locally distilled samsu, which is the only alcoholic beverage manufactured in Brunei. There are two distilleries in the State and excise duty collected amounted to \$33,205.13.

Estate Duty:

This duty is levied under the Stamp Enactment on all Estates, the value of which exceeds \$3,000.00. The rates range from 1% on Estates exceeding \$1,000.00 in value but not exceeding \$5,000.00, up to 20% where the value of the Estate exceeds \$10,000,000.00. Estate duty totalling \$570,827.85 was collected in 1972.

PUBLIC FINANCE AND TAXATION

Income Tax:

Income Tax is levied on the profits of Limited Companies other than Oil Companies at a rate of 30%. Oil Companies pay Income Tax under special arrangements. The total amount of all Income Tax collected during the year was \$121,919,466.95.

Stamp Duty:

Stamp Duty is chargeable on a wide range of documents in accordance with the provisions of the Stamp Enactment. Stamp Duty collected in 1972 totalled \$122,775.17.

Licences:

Fees are charged for Business Registrations and a wide variety of licences are issued for control rather than revenue purposes. The main items covered by licences are Arms and Ammunition, Distilleries, Fishing, Pawnshops, Money Lenders, Rubber Dealers and Vehicles. Revenue from licences amounted to \$922,442.60 in 1972.

CURRENCY AND BANKING

Currency:

Currency issued by the Brunei Currency Board is legal tender in Brunei as provided by Section 13 of the Currency Enactment, 1967. The notes are legal tender at their face value for the payment of any amount and the coins are legal tender up to an amount not exceeding ten dollars in the case of the fifty cents coins and up to an amount of two dollars in the case of lower denominations.

PUBLIC FINANCE AND TAXATION

Currency issued by the Board of Commissioner of Currency, Malays and British Borneo ceased to be legal tender in Brunei with effect from 16th January, 1969.

Members of the Currency Board

Chairman : Yang Berhormat Pehin Orang Kaya Khazanah
Negara Laila Di-Raja Dato Laila Utama J.
Lee, D.K., S.P.M.B., D.S.N.B., C.B.E.,
P.H.B.S., P.J.K..

Members : Yang Teramat Mulia Seri Paduk Duli Pen-
giran Temmanggong Pg.Hj. Mohammad b.Pg.
Abd. Rahman Piut, D.K., S.P.M.B., D.S.N.
B., P.A.N.B., P.O.A.S., M.B.E., P.J.K..

Awang Chong Thau Fah, S.L.J.
Awang P.L. Ogilvy-Stuart.

Value :

The parity of the Brunei dollar is 0.290299 grammes of fine gold. Brunei dollars are issued and redeemed against sterling.

Issues and Redemptions:

The Currency Board adopted the following minima for issues and redemptions:-

£10,000
\$BR. 100.000

-Issues
-Redemptions

PUBLIC FINANCE AND TAXATION

Notes:

Brunei Currency notes of \$1. \$5. \$10. \$50. and \$100 have been issued. Each bears the effigy of either the present Sultan and Head of State Sir Muda Hassanal Bolkiah Mu' izaddin Waddaulah or the former Sultan Sir Omar Ali Saifuddin on the obverse and a representation of the Omar Ali Saifuddin Mosque in Bandar Seri Begawan on the reverse.

Coins:

Brunei Coins of 1¢, 5¢, 10¢, 50¢ and \$1 denominations have been issued. The 1 cent is of bronze, the 5, 10, 20, 50 and \$1 coins are of cupro nickle. The \$1 coin was issued in proof form and in a limited number.

Interchangeability of Brunei, Malaysian and Singapore Currencies:

During 1972 Malaysian and Singapore currencies were acceptable in Brunei as customary tender under reciprocal interchangeability arrangements with the monetary authorities of those countries.

Brunei Currency Circulation at 31st December, 1972

DENOMINATION	Circulation
1 cent	15,120.84
5 cent	139,087.20
10 cent	577,480.40
20 cent	776,218.40

PUBLIC FINANCE AND TAXATION

50 cent	775,825.00
\$1 coin	4,988.00
<hr/>	
Total Coins	BR\$2,288,719.84
<hr/>	
\$1	2,430,160.00
5	1,127,595.00
10	9,195,155.00
50	19,428,250.00
100	20,422,250.00
<hr/>	
Total Notes	BR\$52,603,410.00
<hr/>	
GRAND TOTAL	BR\$54,892,129.84
<hr/>	

Banking:

Banking is controlled by the Banking Enactment 1956 which came into force on 1st January 1957. Banking facilities, including Savings Bank business are provided by the HongKong & Shanghai Banking Corporation, The Chartered Bank, Malayan Banking Limited, The United Malayan Banking Corporation Limited, The National Bank Limited, The First National City Bank and Bank of America.

Post office Savings-Bank:

Deposits in the Savings Bank for the period 31st December, 1955 to 31st December 1971 are shown in the following table :-

Year	Number of Depositors	Amount of Deposits
31.12.55	1,872	\$670,633

PUBLIC FINANCE AND TAXATION

31.12.60	1,984	408,374
31.12.65	1,817	342,173
31.12.66	1,818	338,250
31.12.67	1,897	340,935
31.12.68	1,874	174,121
31.12.69	1,846	357,017
31.12.70	1,844	320,854
31.12.71	1,845	292,075
31.12.72	1,854	275,836

CHAPTER 6

COMMERCE

The value of imports declined considerably from that of the previous year due mainly to the main requirements for the construction of the Liquidified Natural Gas project at Lumut having been imported.

The largest decreases were in manufactured goods and machinery and transport equipment. As anticipated the trade deficit temporarily experienced by Brunei in the previous year had now been restored to well above its normal level. This was mainly due to the substantial increase in the export of crude oil.

The first shipment of liquidified natural gas of 73,000 cubic metres to Osaka, Japan by the "Gadunia" was exported on 9th December. There will be regular shipments of this product from now on.

The total tonnage of cargo discharged also showed a decrease of about 62,000 for reasons stated above.

Import duties collected again rose slightly over last year due to the increase in Milk and Cream; Sugar; Coffee and Tea; Alcoholic Beverages and Tobacco; Mineral Fuels and Lubricants; and Perfumery and Cosmetics.

Exports of local produce other than oil declined from last year's levels due to poorer overseas prices. However, the export duties collected had more than double that of the previous year with the sudden demand for fresh prawns, which was a dutiable item, by markets in Singapore.

The reduction in the value of exports of rubber, jelutong, natural gas, hides and pepper was more than offset by an increase of more than \$160 million in the value of crude oil.

COMMERCE

External Trade:

The value of external trade for the State for 1972 was estimated at \$801,342,793 compared with \$780,189,637 for 1971.

	<u>1972</u>	<u>1971</u>	<u>1970</u>
Total value of exports	\$501,137,738	\$323,636,115	\$292,063,069
Total value of exports	<u>300,205,055</u>	<u>456,553,522</u>	<u>256,122,208</u>
Favourable Trade Balance in 1972	<u>\$200,932,683</u>	<u>\$132,917,407</u>	<u>\$ 35,940,861</u>

PRODUCTION

Exports:

The F.O.B. value of exports for 1972 was estimated at \$501,137,738 made up as follows

	<u>1972</u>	<u>1971</u>	<u>1970</u>
Crude Oil	\$464,905,106	\$304,815,218	\$276,538,343
Plantation Rubber	58,051	147,702	399,383
Jelutong, raw, pressed and refined	131,008	149,650	97,421
Gas, natural	394,629	536,509	839,511
Cow and Buffalo Hides	42,810	43,910	47,840
Pepper, black	1,267	28,996	1,518
Pepper, white	18,194	33,384	10,195
Sundries including Re-exports	35,586,673	17,880,746	14,128,858
	<u>\$501,137,738</u>	<u>\$323,636,115</u>	<u>\$292,063,069</u>

Imports:

The declared value of imports for 1972 was estimated at \$300,205,055 made up as follows:-

	<u>1972</u>	<u>1971</u>	<u>1970</u>
Food	\$ 43,148,207	\$ 37,466,291	\$ 34,395,946
Beverages and Tobacco	7,971,597	7,671,769	7,544,778
Crude materials, indeible, except fuels	7,647,075	6,624,127	8,342,634
Mineral fuels, lubricants, and related materials	5,209,287	4,602,802	5,679,725
Animal and vegetable oils and fats	1,402,881	1,428,964	1,324,426
Chemicals and products of chemical industries	17,978,245	17,666,998	12,420,189
Manufactured goods classified chiefly by material	77,063,402	135,726,542	69,931,077
Machinery and Transport equipment	113,108,996	214,867,591	92,610,583
Miscellaneous manufactured articles	22,246,008	21,819,354	15,499,534
Transactions and commodities notelsewhere specified	4,429,357	8,679,084	8,373,316
	<u>\$300,205,055</u>	<u>\$456,553,522</u>	<u>\$256,122,208</u>

COMMERCE

Cargo Tonnage:

The total tonnage of cargo discharged and loaded for the year 1972 was as follows:-

	<u>1972</u>		<u>1971</u>		<u>1970</u>	
	<u>Discharged</u>	<u>Loaded</u>	<u>Discharged</u>	<u>Loaded</u>	<u>Discharged</u>	<u>Loaded</u>
Bandar Seri Begawan	251,856	61,568	264,710	105,988	207,697	79,920
Kuala Belait	101,239	11,573	150,354	3,664	131,608	1,723
	353,095	73,141	415,064	109,652	339,305	81,643

Custom Revenue:

The total Customs revenue for 1972 amounted to \$9,774,263,63:-

	<u>1972</u>	<u>1971</u>	<u>1970</u>
Export Duties	\$ 50,931,97	\$ 22,091,88	\$ 22,701,25
Import Duties	<u>\$9,723,331,66</u>	<u>\$9,045,648,62</u>	<u>\$8,715,998,48</u>
	<u>\$9,774,263,63</u>	<u>\$9,067,740.50</u>	<u>\$8,738,699,73</u>

Tariff:

There was no change in Customs Tariff during the year under review.

Excise:

The only alcoholic beverage distilled in the State is samsu, the product of three distilleries, Excise duty is chargeable at \$5.00 per gallon, and duty collected in 1972 amounted to \$16,664,16 compared with \$17,740.84 in 1971.

Administration:

The Customs Department, under the administration of the Controller, is responsible for the collection of all import and export duties levied in the State.

CHAPTER 7

PRODUCTION

(a) Agriculture

The Agriculture Department continued its work throughout the year under the administration of the Acting Director Mr. B.R. Hewitt up to the end of November when the new Director Mr. R. B. Woodroffe arrived to take up his appointment.

Substantial changes of policy were held in abeyance until the arrival of the new Director and meanwhile the Department continued the policies of providing services to farmers that have been followed in earlier years. The Department's policy has up to now been one of providing advice and assistance to the Brunei farming community in the form of fertiliser, pest and disease control chemicals, improved tree crop seedlings and improved livestock as well as assistance in Veterinary services, fencing, drainage, irrigation and cultivations. These activities, which are carried on among the farming community by the extension service, have been strengthened during the past two years by the addition of Specialist research staff. This has enabled the Department not only to improve the fundamental knowledge of the extension Staff but also to broaden the scope of advice and assistance given to farmers. During the year the excellent start made by the Plant Pathology section was continued and the work on the pests and disease of Brunei crops further improved by the commencement of active work by the Entomological laboratory. Work of the soils Survey section continued to be hampered by lack of an effective laboratory. The Agronomy section undertook limited trials on rice and continued development of horticultural and tree crop nurseries whilst the veterinary section continued to provide services to the States domestic and farm livestock. Departmental livestock were maintained but no serious live-

PRODUCTION

stock husbandry development was possible in the absence of qualified staff. During the year a Brunei agricultural graduate was placed in charge of the Pasture Research programme and a promising start was made in this work which is so essential for the future livestock development.

During the year three students completed overseas diploma Studies in agriculture at Serdang and returned to join the Department as Senior Agricultural Assistants greatly strengthening the extension staff. Another twenty-seven students continue overseas studies and it is hoped that nine of these will qualify during 1973 to add to the trained strength of the veterinary, extension and agronomy sections.

Soil Survey and Chemistry

Project 2/1970

This project is a continuing one with the objective of examining in detail the climatic factors affecting Brunei, its soils and its agriculture. An interim report on rainfall probabilities up to the end of 1970 was submitted in April 1971 and summarized in the State Annual Report for 1970. Data on rainfall and other climatic parameters continued to be collected throughout the year for all recording stations as part of this project. More comprehensive recording stations are being established in 1973 and a more accurate assessment will be possible in the future of the local climatic pattern.

Project 1/1971

This project had as its objective a detailed survey of Birau Agricultural Station and a detailed reconnaissance

PRODUCTION

survey of the station surrounds. During the year the detailed survey of the station was completed as well as 5000 acres of the surrounding area. Work continuous on this project.

Project 3/1971

Consists of a general reexamination of the work carried out in 1955 by Messrs Blackburn and Baker of the Commonwealth Scientific and Industrial Research Organization of Australia on topo sheet 4/114/4 in the Brunei/Muara District with a view to producing a revised soil map at series level and to assist in establishing a soil survey legend applicable to the State as a whole. Work was carried out on an ad hoc basis during the year.

Project 1/1972

This project involved an examination of soils and erosion at the Royal Brunei Malay Regiment's Camp at Berakas in order to assess the state of accelerated soil erosion at the site, to make recommendations for its control and to advise on the state of the protective cover being established by the Forestry Department. This project was initiated at the request of the Conservator of Forests and was carried out in March and April. In general the conclusion drawn was that accelerated erosion was so advanced that its control was now a matter for applying engineering remedial measures and that the situation was beyond the scope of resources of an Agricultural or Forestry Department. A report to this effect was submitted to the Conservator.

PRODUCTION

Project 2/1972

The objective of this project was to examine the soils of the Rampayoh and Labi areas of Belait district to assess their suitability for padi cultivation under irrigation. This was started three weeks before the Soils Scientist went on leave and preliminary observations were made on the two proposed padi areas at Sengkuang and Mobile as well as on the soils formed on the large alluvial fan deposited by the Rampayoh river in order to establish the broad soil pattern of the area. A survey will now have to be made of the whole area in order to map the soils at detailed level and this will continue in 1973.

Further observations

During the course of the previous two years, it has been established that in addition to the known low fertility status of Brunei's soils, a general magnesium deficiency is present on all soils with exception of recent riverine alluvial soils. A deficiency of boron has been recognized and is particularly pronounced on sandy soils formed on river and marine terraces. In addition widespread symptoms of this deficiency have been recognized on tree crops growing on soils of the Bijat family. Copper deficiency, as is to be expected, is found on crops growing on peat soils and also in the Lumapas area on citrus and other fruit crops growing on the limestone derived soils in that area.

Soils Chemistry

The bulk of the equipment ordered in 1971 arrived during the first six months of the year. Lack of suitable premises and water precluded laboratory work from being started but towards the end of the year steps were put in hand to remedy this situation.

PRODUCTION

Advisory work

During the year numerous visits were made to farms chiefly in connection with advising on fertilizers to correct deficiencies of K, Mg, B and in one case Cu. Advice was also sought in connection with Iron and Manganese toxicity in padi and in every case examined this was found to be due to stagnant water conditions in the field.

In three cases, consulting engineers sought advice directly or through their contractors on establishing grass on steep slopes and the stabilization and control of erosion on spoil heaps. A request by a firm of consultant surveyors to pronounce on the cause of a landslide at Tutong had to be turned down for ethical reasons.

PLANT PATHOLOGY

A. Advisory Services and general observations

During the year a drop of some 20 per cent occurred in the number of specimens (402) submitted for diagnosis. This is probably a reflection of the considerable extension to the normal dry season. Farmers have continued to avail themselves of this free service coupled with an increasing demand for disease control chemicals.

The general disease picture in crops of economic importance is now clear. Dithane M-45 is considered the most versatile fungicide, but Benlate has been used on a wide scale.

Brown spot (*Drechslera Oryzae*) was again the most common disease in rice, but seedbed incidence was relatively low for the second year running. This is due to the

PRODUCTION

increasing use of organo mercurials for seed-dressing. It is estimated that about one half of the rice acreage was planted with dressed seed and it is hoped that increased extension activity will improve matters further. Apart from a moderate infection on introduced exotic cultivars, blast (*Piricularia Oryzae*) remains a minor malady. Of minor importance are *Leptosphaeria Oryzinae* and *Cercospora Oryzae*. Although discovered during the year, false smut (*Ustilaginoides Virens*) was rare and bacterial diseases have not yet been confirmed in the state.

Vegetables generally had a lower disease incidence owing to the drier season. Farmers are now being encouraged to use seed dressings as a routine measure.

In chillies, powery mildew *Leveillula taurica* was recorded for the first time in the state, but powery mildews are not a problem on any crop. Anthracnose *Glomerella Cingulata* caused considerable fruit loss in several areas; provided spraying is started early enough Dithane M-45 effects a good measure of control. The smaller bird's eye chilli does not seem to be affected.

Dwarf French beans had rust (*Uromyces appendiculatus* *Cercospora* leafspots; anthracnose (*Colletotrichum Indemuthianum*) was also recorded but was of minor importance.

The usual diseases were widespread in cucurbita (*Cercospora Citrullina*, *Didymella bryoniae* and *Colletotrichum lagenarium*). Anthracnose, although widespread was not as damaging as in the wetter season of 1971. However losses from fruit rot still occurred on economic scale. Watermelon mosaic was recorded in bitter gourd and rock melons.

PRODUCTION

Maize is normally grown for consumption as a vegetable, but the crop grows well here and there is a need for introduction of improved cultivars, preferably synthetics and composites rather than hybrids. Leaf blight (**Cochliobolus heterostrophus**) is common but not serious. Rust (**Puccinia polysora**) is more damaging on introduced hybrids than on local variety. So far, both these diseases have appeared at a mature plant stage when damage is negligible. One crop was wiped out under drought conditions aided by a heavy attack of seedling blight caused by **Curvularia leonensis**

Several cases of root and collar rot and fruit rot in pawpaw have been caused by **Phytophthora nicotianae** var. **parasitica**. The first syndrome appears only under water-logged conditions, but the second is not common generally.

In groundnuts, **Mycosphaerella arachidicola** is common and all introduced varieties had rust (**Puccinia arachidis**) in varying amounts. The latter disease is still confined to the site of the original outbreak discovered for the first time in the region in 1971.

One of the most popular local vegetable is the long bean and while **Cercospora Cruenta**, **C. Canescens**, **Uromyces appendiculatus** and **choanephora cucurbitarum** are common throughout the state, crop loss from these pathogens appears minimal. Two new leafspots caused by **Ascochyta phaseolorum** and **Cephalosporium Zonatum** are recorded.

As a means of substantially increasing income for farmers tomatoes have considerable attractions. While a range of diseases exist, including early blight (**Alternaria Solani**) and stem and fruit rot (**Didymellaly Copersicii**), spraying with Dithana M-45 gives good control. However in the three

PRODUCTION

trials with introduced cultivars, heavy losses of young fruit (up to 90% in one trial and 50-60% in the other two) have occurred from blossom end rot. The fruits developed a brownish black spot at the distal end which reach a diameter of $\frac{1}{2}$ - 1". No pathogenic organism has been isolated from the young lesions but subsequent invasion by insects and saprophytic fungi usually rots the whole fruit. The addition of lime or rock phosphate (40% CaO) does not appear to have a significant effect. For maximum yields this condition will have to be ameliorated, although yields obtained are still highly profitable.

A survey of fruit diseases of passion fruit has been completed. The commonest fungi are **Glomerella Cingulata** **Corticium Colani** , **Fusicarium moniliformae** and **Botryodiplodia theobromae** . Only rarely are fruits on the plants infected, but when fruits drop a rapid rotting of the fruit can be expected within 2-3 days.

In citrus two diseases are paramount, scab (**Elsinoe fawcettii**) especially on limes and recently the Sungai Liang area has suffered severe losses of mandarin oranges (**C. nobilis**) from foot and root rot caused by, presumably *Phytophthora palmivora*. Neighbouring pepper plants have also shown classical symptoms of this disease. Until cultural and soil conditions have been improved the application of chemicals would be a waste of time.

In the indigenous forest species **Shorea albida** , a hollow heart condition causes considerable loss of valuable timber. The only external symptom is the consistent appearance of termite nests, but this is thought to be a secondary symptom.

Since the trees are extracted from virgin forest difficult of access, it is unlikely that a practical solution to the

PRODUCTION

problem will be found but it will be satisfying to find the causal organism, if any. So far no likely pathogens have been isolated. The CMI consultant forest pathologist has visited the area. *Seehiria pini* remains at a very low level on *Pinus Caribaea*.

Table 1

Breakdown of specimens received for diagnosis

Crop	Number	Percentage
Vegetables	63	15.8
Non citrus fruit	62	15.4
Ornamentals	60	14.9
Rice	20	5.0
Citrus	18	4.5
Long beans	15	3.7
Forest trees	15	3.7
Groundnuts	13	3.2
Cereals (Maize, Sorghum)	8	2.0
Bananas	6	1.5
Legumes and cover crops	6	1.5
Grasses	2	0.5
Miscellaneous, chillies, sugar, pepper, oil palm, rubber and agarics	114	28.3
	402	100
	402	100

PRODUCTION

New pathogen records are given in Appendix 1.

B. Seed Testing

There was an increase in the number (83) of seed samples submitted for testing. Rice again predominated. From the major seed producing station quality left much to be desired, seed being heavily infected with species of *Aspergillus* and *Penicillium*. This was due to putting damp seed into store. Loss of germinative capacity varied from 20-40%. Brown spot infection was round 2% but only two samples had blast.

Demand for seed dressing chemicals continued on an increasing scale and it seems that this simple effective measure is becoming popular with farmers.

The quality of vegetables, particularly long beans produced by agricultural stations showed a marked improvement, the result of a change in harvesting procedure whereby the produce is harvested much earlier.

All seed produced on Government stations is dressed with fungicide before release.

C. Plant Import and Export

The pattern of imports and exports remains unchanged. Of the ninety one import permits issued most were for ornamentals, particularly orchids and fruit trees. There was an increase in quantities of economic grasses and legumes imported. Several consignments were detained for treatment; this is done by the section at nominal charge. A consignment of flower bulbs from the UK was found to harbour two species of parasitic nematodes.

PRODUCTION

Fifty three phytosanitary certificates were issued mainly for export of ornamentals to neighbouring countries.

D. Nematodes

Further work has been done in sampling the major crops in the state for the presence of parasitic nematodes.

Rotylenchulus reniformis appears to be widely distributed and has been recorded on bananas and pawpaw. In the latter crop an almost complete kill of a stand of year old trees occurred in combination with **Phytophthora nicotianae** var. **Parasitica** under somewhat wet conditions.

In rice, only **Helicotylenchus** sp. and **Aphelenoides bicaudatus**, has been found; the other serious rice nematode *Aphelenoides besseyi* has not yet been detected, although present in neighbouring countries.

In bananas only **Helicotylenchus multiunctus** and **Meloidogyne** sp. have been found. Despite sampling at many sites *Radopholus similis*, the major banana nematode, has not been detected.

E. Experimental

During the year work has been carried out on the economics of chemical control of anthracnose (**Colletotrichum** **Legenarium**) in watermelon and several observational trials on various introduced crop cultivars to assess the role of diseases and to obtain preliminary data on their potential and economics in Brunei. These initial observations indicate that there are several worthwhile possibilities which ought now to be fully expanded agronomically.

PRODUCTION

1. Watermelons

A fully replicated randomized block (4 x 7) design was used to test the efficiency of three chemicals in controlling anthracnose. Due to the drier season the disease was late in appearing but results were highly satisfactory in terms of control and therefore economic results. The three chemicals, Dithane M-45 (Mancozeb), Benomyl (Benlate) and were used at the recommended rate every 10-12 days once first foliar symptoms of the disease were observed. Attainment of full yield in watermelon and other cucurbits is dependent on a rigid control of the watermelon fly (**Dacus Cucurbitae**) which can cause complete crop loss. In this experiment Dimecron was successfully used, starting after first fruit set and continuing every 12-15 days until fruit set is complete.

Plots, which consisted of two hills, each of three plants were given a basal dressing of 20lbs. farmyard manure, and 4 ozs. of CIRP (rock phosphate), plus three top dressings (2 ozs. each) of a 1:1 mixture of urea and potassium sulphate starting at the beginning vine running.

A brief summary of results are given in the table below.

Table 2

The effect of various chemicals on yield of marketable fruit.

TREATMENT

Dithane M-45	13,416	\$2,683/20	\$109/74	\$2,573/50
Benlate	12,161	2,432/10	126/74	2,305/16

PRODUCTION

Cercobin	11,328	2,265/50	116/94	2,148/36
Control	8,697	1,739/50	92/94	1,739/50

Labour costs not included.

Cost of fruit calculated at current market rate of cts.
20/lb.

(£1st. = 6.65 Brunei \$)

All treatments were significantly better than control ($P = 0.05$) with Dithane M-45 and Benlate being significantly better than Cercobin.

It is planned to continue this work for two or three seasons, but a provisional recommendation for the use of Dithane M-45 ($1\frac{1}{2}$ lbs/ac./100 galls) has been made.

On a field scale it was possible to spray 30 acres of farmers crops using motorized knapsacks. The growers expressed satisfaction at the results.

PRODUCTION

2. Rock Melons

This little melon was introduced to the state in 1971 since the local types are very unpalatable. The improved cultivar is very similar in flavour to the honey dew melon. The object of this small trial was to see whether a quick cash crop could be grown to follow the paddy harvest and on a declining rainfall.

A plot of approximately one quarter of an acre was planted in mid June, rather later than would be considered desirable. With the abnormally dry season supplementary water had to be supplied but would not normally be necessary with a March planting. The same manurial regime as for watermelons was used. Again a strict spray schedule for fruit fly control was essential as this pest appears particularly attracted to this fruit. Although all the common cucurbit diseases were found late in the season, no chemical control was found necessary.

Since no cultural information was available when the crop was introduced, a spacing of 10' x 10' was used. This proved excessive and 4' x 4' is now recommended and the economics (table 3) of the trial have been adjusted for this spacing.

Table 3

The economics of growing rock melon (*Cucurbita pepo*)

<u>Yield/ac.(lbs)</u>	<u>Gross Return</u>	<u>Cost Chemicals/ Fertilizer</u>	<u>Net Return</u>
2028	\$1,216/20	52/30	1,164/50

PRODUCTION

This information indicates that in 82 days a highly profitable crop can be grown following paddy. If supplementary water is available two crops can be successfully grown between padi crops. The local market is assured and the fruit command a slightly price (30 cts/lb) than watermelon.

3. Tomatoes

Most of the quality tomatoes available locally are imported and are therefore expensive. Tomatoes do grow in Brunei, but quality is poor and the fruit rather flavourless. In order to obtain some measure of yield and possible return to farmers a small trial was planted in March using two Dutch varieties, Romulus and Fusarium Resistente. A basal dressing of farmyard manure and rock phosphate was given and two top dressings of a complete fertilizer (2 ozs/ yard run), one at first flowering and then at second truss formation.

Both varieties, but particularly Romulus, proved to be exceptionally susceptible to blossom end rot and no manipulation of water and addition of lime seemed to have any effect. As a result it is estimated that 50-65% of the crop was lost.

Despite this Fusarium Resistente gave a yield of 5960 lbs/ac and Romulus 3710 lbs/ac.) of good quality fruit, poor by normal standards but with the wholesale price of \$1/lb, highly profitable. The estimated margin being 5800/ac, and 3580, respectively.

Spraying against bollworm (*Heliothis*) sp. was necessary and three fungicidal sprays were given to control leaf and fruit diseases mentioned earlier. Clearly good quality tomatoes can be grown in Brunei and are likely to be highly

PRODUCTION

profitable. It is desirable that a range of varieties be tried as well as variations in planting times, effect of shade, debudding lateral shoots, etc..

4. New Zealand Spinach

So far as is known this delicious spinach (**Tetragonia** **Expansa**) had never been grown in Brunei before.

The small bed planted in Brunei was slow to establish, but then produced abundant spinach of excellent quality and flavour. Malays who sampled the vegetable indicated that they preferred this to the local varieties of spinach-type vegetables.

The plants set seed normally here and only a little leaf disease (**Corticium Solani** **Cercospora Tetragonia**) was seen and then when the crop was past peak flushing.

As another potential cash earner for the small farmer, this crop should be further investigated to obtain an estimate of yield and profitability.

5. Sunflower

Brunei's annual import bill for stock feeds is substantial so there is scope for investigation with a view to replacing at least part of this expensive item.

Two cultivars, Comet and White Medium were imported and single row observation plots planted at two stations. Although vegetative growth was excellent, seed set was very poor, being approximately 10-15%. Ample wild bees were available for pollination so the probable causes of infertility are likely to be climatic. High temperatures may have

reduced pollenviability. This crop does not therefore look promising, but a further trial is planned where flowering coincides with the wetter, cloudier part of the year.

6. Maize

Maize is grown in the state and used mainly as a green vegetable. Hybrid material from Australia has been imported in the past by Shell but results were not satisfactory. Good crops of local varieties are grown in certain areas in the state and again, from the aspect of local stock feed production, it was thought desirable to introduce new material to assess yield potential and idesease reaction. In addition to three Australian hybrids, synthetic material derived from local African selections have been tried. Further compositis material specially bred for E. Afriean coastal conditions have recently been imported.

Two observational trials have indicated that good yields are possible and that there is no reason why, assuming reasonable cultural conditions, the crop should not make a substantial contribution to cutting the import bill for stock feed. Only two diseases are so far of importance, rust (**Puccinia Polysora**) and leaf blight (**Cochliobolus heterostrophus**) but both occur late in the season with minimal effects. In the case of leaf blight however care is required that no hybrids with TMS oytoplasm are imported, so that the chances of a devastating outbreak of disease (which has occured elsewhere with such material) be minimized.

There is probably scope for some yield improvement in local genotypes, but indications are that improved material will far outyield these on suitable soils and with good husbandry.

A brief synopsis of yields are given in Table 4.

PRODUCTION

Table 4

Computed yields of various maize cultivars at two stations
YIELD IN lbs/ac.

VARIETY	BIRAU	LUAHAN
XL 381 } CH 128 } Hybrids Q 23 }	4356 3948 6034	2029 3248 2223
Metro } Mlonda } Synthetics SV 31 }	2314 - -	- 5579 3929
Local	1815	-

At the Luahan site, the crop suffered badly from drought and only patchy application of supplementary water was possible. The yields of the two synthetic cultivars are therefore encouraging.

In the absence of spraying, significant damage from stem and cob borers (*Heliothis* sp.) results, but the local variety appears less susceptible owing to the complete and tight enclosure of the top of the cob by the outer husks.

Cash consideration of maize growing hinges on whether the crop is sold green as a vegetable or harvested for again. The former method of disposal is far more profitable at current prices and furthermore the local variety yields a greater number of cobs/acre. However for a feed industry

PRODUCTION

profitability is far less and therefor major emphasis must be and cultivars producing high yields. In the Birau trial the two synthetics and local give the highest cash return calculated on cob number, and conversely the lowest on grain yield.

7. Groundnuts

On the basis of a trial with 10 imported varieties from Africa, this crop appears most promising. Yields are summarized in Table 5. Very little of this crop is grown at present in Brunei and an improvement could make a substantial contribution to import replacement for stock food and for human consumption.

Table 5.

Yield of ten groundnut varieties in Brunei.

Variety	Shelling %	Yield of Shelled nuts lbs/ac	Yield of Grade	Maturity Period (days)
Chalimbana (R)	59	6532	5322	158
Florida 416 (R)	59	1915	1116	149
Makulu Red (SB)	67	2083	1333	177
Malimba (EB)	56	1544	882	149
Mani Pintar (SB)	67	2890	2148	175
MB 6616 (SB)	59	3453	1973	149
Mwitunde (SB)	52	4714	3642	151
NC (R)	48	3750	2125	149
Shulamith (B)	56	8750	6250	151
Early Runner (R)	52	4062	1875	148

R = Runner, SB = Spreading Bunch, EB = Erect Bunch,
B = Bunch

PRODUCTION

Calculated at 30,000 plants/acre for R & SB and 60,000 for EB and B.

Problems are likely to occur owing to the continued vegetative growth with Flowering and pegging continuing throughout the season. It is possible therefore that spraying for leaf disease control may not be necessary. Indeed the use of foliar dessicants may well be necessary to arrest plant growth at a time when the maximum economic number of bolls have formed.

8. Tobacco

While there does not appear to be scope for growing the more sophisticated types of tobacco in Brunei, there is a potential in local markets for a coarser type of sun cured tobacco and possibly the production of local cigars. Seed of these varieties have therefore been acquired and was planted in early December.

Growth of the crop has been excellent, although failure of the rains has caused premature flowering. Nevertheless a yield of 300-400 lbs/acre is anticipated. With the current price of about \$1/20 per tahlil (13np/oz) the crop would appear to have scope in the state for a high and speedy cash return.

So far the crop has remained healthy, only a few spots caused by *Phyllosticta Nicotianae* are present.

9. Soyabean

Two plots of soya bean (CV, Palmetto), at 6" x 6" and 6" x 3" were planted in early September. The yields of 635 lbs/ac and 290 lbs. were disappointing. Possible reasons

PRODUCTION

are waterlogging at an early stage, causing stunting, high temperatures and/or showers at flowering. An earlier crop grown at the Shell Agricultural Station gave yields of approximately 900 lbs/ac.

The crop shows some promise and since there are a wide range of cultivars for different areas, introduction of these from different countries is required for further trial. Only a little leaf spotting caused by **Cercospora Canescens** was seen.

10. Mushrooms

Since, after each rice season, there is ample supply of paddy straw the cultivation of paddy mushroom **Volcaceae Volvariella** is a possibility for producing a quick cash return to the paddy farmer.

It is unfortunate therefore that three trials, including one where the straw was fumigated with Methyl Bromide, have been a complete failure, for unknown reasons.

Growing wild in Brunei on grassy swards and lawns is a delicious edible *Agaricus* sp., similar and in no way inferior in flavour to *Agaricus campestris*. The edible qualities of this as yet undetermined species, seems to have escaped the local Malay population, who regard it as poisonous.

The possibilities of culturing this mushroom are being investigated, but so far attempts to germinate basidiospores have failed. It is hoped to continue this work with advice from a UK expert.

Appendix 1

NEW PATHOGEN RECORDS FOR BRUNEI

(IMI Numbers in brackets)

- Abelmoschus exculentus* (L.) Meench. - OKRA
 Cercospora stali (Stev.) Subram.; (162891)
 Myzothecium roridum Tode ex Fr.; (167093b).
 Phoma ibisciola Gz. Fragoso; (167093a).
- Acacia auriculaeformis* A.Cunn.ex Benth.; - BLACK WATTLE
 Meliola sp
- Adiantum peruvianum* L. - MAIDENHAIR FERN
 Glomerella cingulata (Stonem.) Spauld. & Schrenk;
 (*Colletotrichum* state) (163262a).
 Guignardia adianti (Hohn.) Arx & Muller; (163262b).
- Agathis alba* Foxw.
 Botryodiplodia theobromae Pat. (164860).
 Phomopsis sp. (167461)
- Amaranthus gangeticus* L. - BAYAM
 Colletotrichum capsici (Syd.) Butler & Bisby; (164036).
 Corticium solani (Prill. & Delacr.) Bourd. & Galz.
- Angelonia salicariifolia* Humb. & Bonpl.
 Cercospora sp., (167101).
- Arachis hypogaea* L. - GROUNDNUT
 Corticium rolfsii Cruzii;
 C. solani (Prill. & Delacr.) Bourd. & Galz.
 Phaeoseptoria sp.; (167925).
 Phoma exigua Desm.; (167453).
- Artocarpus communis* Forst. - BREADFRUIT
 Scolecobasidium acanthacearum (Cooke)
 M.B. Ellis; (163264).

A. elastica Reinw. - **TEBAP**
Phomopsis sp.: (167921).

Aster sp. - **MICHAELMAS DAISY**
Cercospora sp.; (167449a).
Fusarium sp.; (167449b).

Averrhoa carambola L. - **CARAMBOLA**
Asterina venustula Syd.; (162697).

Axonopus compressus Beauv. - **CARPET GRASS**
Alternaria alternata (Fr.) Keissler; (160830).

Bambusa? sp.
ring spot virus?

Bauhinia acuminata L.
Ophiobolus sp.: (167923b).
Phomopsis bauhiniae Balsa Alcala; (167923a).

Begonia sp. - **BEGONIA**
Choanephora cucurbitarum (Berk. & Rav.) Thaxt.

Bougainvillea sp. - **BOUGAINVILLEA**
Septobasidium sp.

Brassica rapa L. - **CHOY SAM**
Aspergillus tamaris Kita; (167930).

Caladium bicolor Vent.
Corticium rolfsii Cruz

Calendula officinalis L. - **MARIGOLD**
Cercospora calendulae Sacc.; (162395).

Canavalia maritima (Aubl.) Thou
Ramularia sp.; (164034).

Capsicum annum L. - **CHILLI PEPPER**
Corticium solani (Prill. & Delacr.) Bourd. & Galz.
Leveillula taurica (Lev.) Arn.; (167915).

PRODUCTION

Mycosphaerella sp.; (160834)
Penicillium decumbens Thom; (167918).
Septobasidium sp.

Carica papaya L. - PAWPAW

Phytophthora nicotianae van Breda de Haan var. *parasitica*
(Dast.) Waterh.; (164038).

Celosia cristata L. - COCKSCOMB

Cercospora celosiae Syd.; (167098).
Physalospora sp.

Celosia plumosa Hort.

Cercospora celosiae Syd.;
Physalospora sp.

Chrysanthemum indicum L. - CHRYSANTHEMUM

Cercospora chrysanthemicola Yen; (162899a).
Corynespora cassicola (Berk. & Curt.) Wei; (162899b).

Cinnamomum zeylanicum Breyn - CINNAMON

Cephaleuros virescens Kunze

Citrullus vulgaris L. - WATERMELON

Curvularia senegalensis (Speg.) Subram.; (167097).

Citrus aurantifolia Swingle - LIME

Septobasidium pseudopedicellatum

Citrus maxima Merr. - POMELO

Septobasidium sp.

Citrus medica L. - CITRUS

Elsinoe fawcettii Bitanc. & Jenk.

Citrus nobilis Lour. - MANDARIN ORANGE

Aspergillus sp.; (162893c).
Cladosporium sphaerospermum Penz.; (162893a)
Geotrichum candidum Link. ex Pers.; (162893b).
Trametes sub-serpens Murr.

PRODUCTION

Clitorea ternatea L.

Cercospora ternatae Petch; (167931).

Coffea liberica Bull ex Hiern. - LIBERICA COFFEE

Colletotrichum capsici (Syd.) Butler & Bisby; (163798).

Pestalotlopsis versicolor (Speg.) Steyaert; (167443).

Colocasia esculentum Schott - TARO

Curvularia leonensis M.B. Ellis; (162885c).

Pleosphaerulina sp.; (162885a).

Teratosphaeria sp.; (162885b).

Congea tomentosa Roxb.

Phoma sp.; (164864).

Congea velutina

Phoma sp.

Cucumis sativus L. - CUCUMBER

Corticium solani (Prill. & Delacr.) Bourd. & Galz.

Fusarium sp.

Cucurbita pepo DC - PUMPEIN

Penicillium sp.; (160926).

C. pepo DC. - ROCK MELON

Cercospora citrullina Cooke

Colletotrichum lagenarium (Pass.) Ellis & Halst.

Corticium rolfsii Curzi

Didymella bryoniae (Auersw.) Rehm.

Pseudoperonospora cubensis (Berk. & Curt.) Rostow.

Watermelon mosaic virus Anderson

Crossandra undulifolia Salisb.

Cephaleuros virescens Kunze

Cyrtostachys lakka Becc. - SEALING WAX PAIM

Cephaleuros virescens Kunze; (163792a).

Phyllosticta sp.; (163792b).

PRODUCTION

Dahlia variabilis (Willd.) Desf. - DAHLIA

Corticium rolfsii Curzi

Dendrobium sp. - ORCHID

Trentepohlia sp. (164869).

Trentepohlia sp. (164870).

Digitaria decumbens - PANGOLA GRASS

Pestalotiopsis sp.; (163263).

Durio zibethinus Murr. - DURIAN

Corynespora cassicola (Burt. & Curt.) Wei; (167092).

Elaeis guineensis Jacq. - OLD PALM

Cephaleuros virescens Kunze

Marasmius palmivorus Sharples

Melanconium sp.; (164857).

Pestalotiopsis palmarum (Cooke) Steyaert

Scutellinia badiobarbis Berk. & Cooke

Eqiphyllum oxypetalum Haw.

**Glomerella cingulata (Stonem.) Spauld. & Schrenk
(Colletotrichum state); (160836).**

Eupatorium odoratum L. - MANGOSTEEN

Cephaleuros virescens Kunze

Mycosphaerella sp.

Glycine max (L.) Merr. - SOYA BEAN

Cercospora canescens Ell. & Mart.

Choanephora cucurbitarum (Berk. & Rav.) Thaxt.

Cochliobolus geniculatus Nelson (Curvularia state).

Helianthus annuus L. - SUNFLOWER

Choanephora cucurbitarum (Berk. & Rav.) Thaxt.

Hevea brasiliensis Muell. - Arg. - RUBBER

Ceratocystis fimbriata Ell. & Halst.

Cercospora heveae Vincens.; (167451).

PRODUCTION

- Fomitopsis hemitephra* (Berk.) G.H. Cunn
Rigidoporus lignosus (Klotzch) Imazeki
- Hibicus mutabilis* L. - ROSE OF SHARON
Cercospora malayensis Stevens & Solheim; (162888).
Oidium sp.
Phyllosticta rosae - *sinensis* Cejp; (167916).
- H. schizopetalus* Hook. f.
Choanephora cucurbitarum (Berk. & Rav.)
Thaxt.; (167457).
- Hydrangea macrophylla* Ser. - HYDRANGEA
Phyllostictina sp.; (167096).
- Ipomoea aquatica* Forsk. - KANG KONG
Cercospora ipomoeae Sawada; (163258).
Corticium solani (Prill. & Delacr.) Bourd. & Galz.
- Ipomoea bana* - *nox* L. - MOONFLOWER
Cercospora ipomoeae Wint.; (160827).
- Ixora coccinea* L.
Pestalotia planimi Vize; (163796).
- Jacobinia obtusior* (Nees) Bailey
Cercospora justicii - *cola* Tai; (160835).
- Jacquemontia tomentella* (Miq.) Hallier f. var *micrantha*
Hallier f.
Aecidium jacquemontiae Ell. & Ev.; (169473).
- Jasminum sambac* Ait. - JASMINE
Meliola jasmini Hansf. & Stev.
- Kopsia fruticosa* A. DC.
Cephaleuros virescens Kunze; (163795).
- Lagenaria vulgaris* Ser. - BITTER GOURD
Glomerella cingulata (Stonem.) Spauld. & Schrenk

PRODUCTION

(*Colletotrichum* state); (160833b).
Pheosphaerulina sp. (160833a)
Watermelon mosaic virus Anderson

Luffa acutangula Roxb. - **ANGLIED LOOFAH**
Colletotrichum lagenarium (Pass.) Ellis &
Halst.; (167919a).

Lycopersicon esculentum Mill. - **TOMATO**
Cladosporium oxysporium Berk. & Curt.; (167104d).
Curvularia eragrostidis (Henn.) J. A. Meyer; (167104b).
Leptosphaerulina trifolii (Rostr.) Petrak; (164866a).
Myrothecium roridum Tode ex Fr.; (167104c).
Periconia byssoides Pers. ex Merat; (167104e).

Mangifera indica L - **MANGO**
Corticium rolfsii Curzi (162662).
Corynespora cassicola (Berk. & Curt.) Wei (163259b).
Cylindrotrichum sp. (163259a).
Periconia byssoides Pers. ex Merat; (167103).
Pestalotiopsis mangiferae (Henn.) Steyaert; (167103).
Phomopsis mangiferae Ahmad; (167455).
Stigmina mangiferae (Koorders) M. B. Ellis; (165559).

Melanorrhoea sp.
Brooksia tropicalis Hansf.; (167926).

Momordica charantia L. - **BITTER CUCUMBER**
Cercospora citrullina Cooke

Mussaenda glabra Vahl. - **MUSSAENDA**
Guignardia sp.; (160828).

Nephellium lappaceum L. - **RAMBUTAN**
Septobasidium bogoriense Pat.; (164871).

N. litchi Camb. - **LONGAN**
Cephaleuros virescens Kunze

PRODUCTION

***Nicotiana tabacum* L. - TOBACCO**

***Mycosphaerella* sp.; (163791b).**

***Phyllosticta nicotianae* Ellis & Everh.; (163791a).**

***Oryza sativa* L. - RICE**

***Ustilaginoidea virens* (Cooke) Tak.**

***Passiflora edulis* Sims f. sp. flavicarpa Deg. - PASSION FRUIT**

***Aspergillus oculosus* Iizuka; (162894).**

***Botryodiplodia theobromae* Pat.**

***P. Foetida* L.**

***Schiffnerula mirabilis* Hohnel**

***Petroselinum crispum* (Mill.) Nym - PARSLEY**

***Cercospora apli* Fres.; (167920a).**

***Cochliobolus geniculatus* Nelson (*Curvularia state*);
(167920b).**

***Petunia* sp. 'hybrid' - PETUNIA**

***Cercospora petuniae* (Saito) Chupp & Muller; (164859).**

***Choanephora cucurbitarum* (Berk. & Rav.) Thaxt.;
(164858).**

***Phaseolus vulgaris* L. - FRENCH DWARF BEAN**

***Cercospora canescens* Ell. & Mart.**

***C. cruenta* Sacc.**

***Colletotrichum lindemuthianum* (Sacc. & Magn.)
Br. & Cav. (164856a).**

***Corticium rolfsii* Curzi**

***C. Solani* (Prill. & Delacr.) Bourd. & Galz.**

***Nigrospora sacchari* (Speg.) Mason; (164856b).**

***Uromyces appendiculatus* (Pers.) Unger**

***Physalis peruviana* L. - CAPE GOOSEBERRY**

***Cercospora physalidis* Ellis; (167095).**

Piper betle L. - BETEL NUT

Guignardia piperis (Rehm) Arx & Muller; (162884).

Plumbago capensis Thunb.

Cercospora sp.

Psophocarpus tetragonolobus DC. - FOUR ANGLE BEAN

Meliola erythrinae Syd. var. *psophocarpi* Hansf.;

(164867).

Myrothecium roridum Tode ex Fr.

Raphanus sativus L. var. hortensis Backer - CHINESE RADISH

Corticium rolfsii Curzi

Curvularia eragrostidis (P. Henn.) J. A. Meyer;

(162883b).

Cochliobolus geniculatus Nelson (*Curvularia* state);

(162883b).

Roupellia grata Hook.

Cephaleuros virescens Kunze

Saccharum? arundinaceum Retz - BOS SOON

Leptosphaeria culmicola (Fr. ex Fr.) Karst.; (167099).

S. officinarum L. - SUGARCANE

Ceratocytis paradoxa (Dade) C. Moreau

Salpiglossis sinuata Ruiz & Pav. - SALPIGLOSSIS

Cercospora sp.; (162886).

Shorea albida

Corioloopsis badia (Berk.) Murr.

Graphina sp.

Pertusaria sp.; (165488).

Trentepohlia.; (as a phycobiont).

S. inequilateralis

Macrophylllosticta sp.; (167462).

Solanum melongenae L. - EGG PLANT

Colletotrichum capsici (Syd.) Butler & Bisby
Corticium salmonicolor Berk. & Br.
C. Solani (Prill. & Delaer.) Bourd. & Galz.
Myrothecium roridum Tode ex Fr.; (167929).

Sorghum vulgare Pers.

Cercospora sorghi Ell. & Ev.
Phyllanchora sacchari P. Henn.

Tetragonia expansa Murr. - NEW ZEALAND SPINCH

Cercospora tetragoniae (Speg.) Vassil; (167100).
Corticium solani (Prill. & Delacr.) Bourd. & Galz.

Theobroma cacao L. - CACAO

Marasmiellus scandens (Mass.) Dennis & Reid

Thunbergia crecta (Benth.) T. Anders

Cercospora thunbergiana Yen; (164035).

Tropaeolum majus L. - NASTURTIUM

Glomerella cingulata (Stonem.) Spauld. & Schrenk;
(162897).

Vigna sesquipedalis L. - LONG BEAN

Ascochyta phaseolorum Sacc.; (162696a).
Cophaesporium zonatum Saw.; (1626695).
Mycosphaerella sp. (162696b).

Zea mays L. - MAIZE

Cochliobolus geniculatus Nelson (*Curvularia state*);
(167094c).
Curvularia leonensis M.B. Ellis; (167094b)
Phaeotrichoconis crotalariae (Salam & Rao) Subram.;
(167094a).
Maize streak virus. Storey

MISCELLANEOUS (MAINLY BASIDIOMYCETES)

On Lawns and Grass Swards

Calvatia cyathiformis sp. *cyathiformis*

Collybia (*Marasmiellus*) *hirtella* (Berk. & Br.) Dennis

Coprinus? sp. nov.

Leptonia cfr *quinquecolor* (Cooke & Mas.) Sacc.

Psathyrella sp.

On Rice Straw

Leucocoprinus cepaestipes (Sow. ex Fr.) Pat.

Rhodophyllous sp.

On Cat Dung

Chaetomium bostrychodes Zopf

On Soil

Clitopilus peri (Berk. ; & Br.) Petch

Dictyophora indusiata (Pres.) Fisch.

Marasmius cirinisequi F. Muell.

Oleurotus hygropanus (Mont.) Dennis

Sclerotium xanthoderma Petch

On Dead Wood

AMAuroderma rogosum (Blume & Nees) Torrend

Entoloma sp.

Gomphus laterarius (Petch) Peterson = *Linderomyces*

Laterarius (Petch) Singer

Gymnopilus sp.

Gyroporous sp. close to *G. cyanescens*

Hygrocybe firma (Berk. & Br.) Singer

Lentinus strigosa (Schw.) Fr.

L. velutinus Fr.

Macrolepiota sp.

Microporous affinis (Blume & Nees) O. Kuntze

Oudemansiella canarii (Jungh.) v. Hohn.

Panaeolus antillarum (Fr.) Dennis

PRODUCTION

Termitomyces clypeatus, Heim
Tehlephora sp.
Xylaria allantodea (Berk.) Fr.

Appendix 2

New Pathogen Records for Brunei

ON

Arachis hypogaeae - GROUNDNUT

Aphelenoides sp.
Rhabditid sp.

Carica papaya - PAWPAW

Aphelenchus avenae Bastian, 1865
Rotylenchulus reniformis Linford & Oliveira, 1940

Citrus nobilis - MANDARIN ORANGE

Aglencus sp.
Aphelenchus avenae Bastian, 1865
Ditylenchus sp.
Tylenchorhynchus sp.

Hibiscus sp. - HIBISCUS

Meloidogyne sp.

Musa sapientum - BANANA

Aphelenchus sp.
Helicotylenchus multicinctus (Cobb, 1893) Golden, 1956
Rotylenchulus reniformis Linford & Oliveira, 1940

Oryza sativa - RICE

Aphelenoides bicaudatus (Urm. 1931) Filipjev &
Schoorman Stekhoven, 1941.

PRODUCTION

Vasiria sp.
Heplicotylenchus sp.
Nectylenchid sp.

Petunia sp.
Xiphenema sp.

Sansevieria sp.
Rhabditid sp. (In a leaf rot)

Vigna sesquipedalis - LONG BEAN
Aphelenchus avenae Bastian, 1865
Aporcelaimellus sp.
Pratylenchus brachyurus (Godfrey, 1929)
Pseudotralenchus sp.
Seinura sp. (Predator)
Tylencholaimus sp.

Zea mays
Aphelencoides sp.
Criconemoides (sensu lato) sp.
Dorylaimus sp.
Typlencholaimus sp.
Tylenchorhynchus sp.

PRODUCTION

Rainfall:

Rainfall for 1972 at the principal research stations is given below in Table I.

Table I
Monthly Rainfall in INCHES

Month	Station			
	Kilanas	Luahan	Lumapas	Birau
Jan.	21.31	17.19	15.35	16.32
Feb.	7.37	7.40	9.32	6.13
Mch.	2.13	5.56	3.50	6.80
Apr.	7.13	5.98	7.28	5.01
May	5.47	4.54	5.89	3.86
June	3.31	3.58	6.29	11.56
July	1.12	0.70	3.45	1.44
Aug.	1.24	1.66	2.74	3.02
Sept.	10.91	8.45	13.19	8.34
Oct.	9.57	7.29	6.01	11.68
Nov.	12.39	17.48	11.38	10.13
Dec.	4.85	7.64	7.93	8.51
Total	86.80	87.47	92.34	92.80

Rain during January was above average and in many places caused lodging of the rice crop. At Luahan there was a shortage of fodder for the cattle between April and September as a result of a combination of low rainfall and poor distribution. Rainfall totals for December was below average.

PRODUCTION

Agricultural Station, Kilanas:

Eight rice variety trials planted during 1971 were successfully harvested at the beginning of 1972. The results and discussion are to be found in the Experiments Section of this report. A further two rice variety trials and one spacing trial were planted in the latter part of this year.

During the year two more water gates were installed, completing water control of all irrigable areas of the station. Rainfall during December was unusually low and difficulty has been experienced in providing enough water for all the rice plots.

Rubber Nursery Berakas:

An area of about 5 acres has been developed for a flower and tree nursery as there is, as yet, no Parks and Gardens Department in the State.

The limited resources of the nursery were stretched considerably during the State visit by Her Majesty Queen Elizabeth II to Brunei on 29th February. In addition to providing landscaping material more than 850 potted plants had to be produced for various ceremonies and places visited by Her Majesty and H.H. the Sultan of Brunei. Other busy occasions were the official opening of the Sultan Hassanal Bolkiah Teachers College on 29th January and His Highness Birthday on 15th July.

Working from the nursery was a mobile team who were responsible for landscaping the Seri Begawan Fountain, the swimming pool at the Istana Darul Hana, the sewage farm and 5 pumping stations, the Residency and replanting the islands on Jalan Sultan. Other work included tree planting in the car park at the Civic Centre, re-turfing the playing

PRODUCTION

fields and surrounds of the Sufri Bolkliah English School , Tutong, at a cost of \$30,000/- and during and landscaping the Gurkha Training School, Tutong at a cost of about \$20,000/-. Plants and trees were supplied for various Government institutions and schools, including the Sir Omar Ali Saifuddin Mosque, the Museum, the Paduka Seri Begawan Sultan Malay College, the Berakas English School etc.

Fruit Tree Nursery, Mentiri:

The entire gazetted area of 5.36 acre has been cleared and drained. Work is in progress to provided and adequate water supply.

During the year the following sales of fruit trees were made:-

Rambutan	-	1,045
Durian	-	106
Mandarin Orange	-	57
Hongkong Orange	-	27
Sour Lime	-	4
Lime	-	12
Mango, Quinin	-	1
Mango, Manila	-	6
Ponderosa	-	11
		<hr/>
Total		<u>1,269</u> =====

Budded Trees available for sale at the end of the year were:-

Rambutan	-	912
Mandarin Orange	-	18
Hongkong Orange	-	4

PRODUCTION

Sour Lime	-	16
Lime	-	3
Ponderosa	-	18
		<hr/>
Total		971
		=====

Seedling material for budding was:-

Rambutan	-	30,000
Durian	-	10,000
Mango	-	2,000
Rough Lemon	-	1,000
Mandarin Orange	-	3,800
		<hr/>
Total		46,800
		=====

Budwood material available:-

<u>fruit</u>	<u>Variety</u>	<u>Origin</u>
Rambutan	R.S. No.4	Malaysia
"	Rs. No.10	"
"	Rs. No.68	"
"	Rs. No.86	"
Mango	Manila	Philippines
"	Philippina	"
"	Siam	Thailand
"	Quinin	Brunei
Mandarin Orange	Not Named	Probably Thailand
Sour Lime	"	Not Known
Lime	"	"
Sweet Orange	Hongkong	Hongkong
Durian	D. 2.	Malaysia
"	SAO No.1	Thailand
"	Kra Dum	"

PRODUCTION

"	Luang	"
Longan	Sri Chom Poo	"
"	Yar Kra Loke	"
"	Beaw Kew	"
Pummelo	Bang Khun	"
"	Tao Tin	"

Agricultural Station, Birau:

This station has been designated a tree crop research station. Up to date about 8 acres of Robusta coffee has been planted. Two different spacings have been used and the initial programme is to investigate pruning. Seedlings of Liberica coffee are nearly ready for planting out.

Two passion fruit trials were planted on 18th August 1971 and harvesting of the first crops started at the end of January 1972. A third trial was planted on 23rd, February 1972 and picking started at the beginning of August. Results are given in the Experiments Section.

Experiments

Rice

Variety Trials

Eight variety trials were planted at the Kilanas Agricultural Station in 1971 and harvested in 1972.

In table II are given the result 4 trials using late maturing varieties on peat and clay soils with and without fertilizer.

PRODUCTION

Table II

Late Maturing Variety Trials, Kilanas 1971/72

Date of sowing, 15.9.71, transplanted 14/24.10.71. Spacing 12" x 12", 3 plants per hill. Plot size, 30' x 8'. Harvested plot size 28' x 6'. Design, Latin Square. Yields in Lb. padi per acre.

VARIETY	CLAY SOIL			PEAT SOIL			MEAN
	TRIAL 1 WITH FERTILIZER	TRIAL 2 WITHOUT FERTILIZER	MEAN	TRIAL 3 WITH FERTILIZER	TRIAL 4 WITHOUT FERTILIZER	MEAN	
SERAUP - 50	2,930	3,357	3,144	2,393	2,957	2,675	2,909
FB-121	3,379	2,866	3,073	2,674	1,188	1,931	2,502
KARTHEGAI	2,768	2,285	2,527	2,812	2,555	2,684	2,695
LANGSAT	3,422	3,138	3,280	2,758	1,834	2,296	2,789
KUNING							
RADIN CHINA	4,651	4,311	4,481	3,967	3,895	3,926	4,204
PUSA PAYA	4,286	4,459	3,373	3,938	3,603	3,771	4,072
MEAN	3,556	3,403	3,480	3,069	2,672	2,881	3,180
S.E.	± 40.0	± 68.9		± 49.5	± 34.6		
L.S.D.	91.8	143.7		103.2	72.2		
(P=0.05)							
(P=0.01)	125.2	196.0		140.8	96.5		



Harvesting double-cropping paddy at the Kilanas Agricultural Station.

PRODUCTION

<u>VARIETY</u>	<u>HARVESTING</u> <u>DATE</u>	<u>ORIGIN</u>
1. Seraup - 50	30. 2. 72	West Malaysia
2. FB - 121	7. 2. 72	Philippines
3. Kartbegai	12. 2. 72	India
4. Langsat Kuning	2. 2. 72	Brunei
5. Radin China	12. 2. 72	West Malaysia
6. Pusa	20. 2. 72	Brunei

Where fertilizler was applied the treatment was 300 lb.
12:12:17:2 (Mgo) + T.E. per acre.

A similar series of trials to those shown in Table II was repeated using early maturing varieties. The results are shown in Table III.

Table III.

Date of sowing, 18.10.71, transplanted 15/17.11.71
Spacing 8'x8", 3 plants per hill. Plot size 30'x8' Harvested
plot size 28.67' x 6.67'. Design, Latin Square yields in lb.
per acre.

Table III

VARIETY	CLAY SOIL			PEAT SOIL		
	TRIAL 5 WITH FERTILIZER	TRIAL 6 WITHOUT FERTILIZER	MEAN	TRIAL 7 WITH FERTILIZER	TRIAL 8 WITHOUT FERTILIZER	MEAN
SI-GADIS	3,724	3,158	3,441	1,682	2,121	1,902
BAHAGIA	3,018	2,837	2,928	1,501	1,995	1,748
IR-5	3,240	2,433	2,837	1,302	2,030	1,666
149/407/-	2,683	2,520	2,602	2,805	2,436	2,621
191/404/-	3,742	3,569	3,656	1,826	2,199	2,013
286/472/-	3,104	3,407	3,256	1,517	1,824	1,671
SI/333/-	2,803	2,878	2,841	1,820	2,150	1,985
MEAN	3,188	2,972	3,080	1,779	2,108	1,944
S.E.	+ 35.5	+ 48.1		+ 21.7	+ 24.0	
L.S.D. (P=0.05)	72.5	98.1		44.3	48.9	
(P=0.01)	97.7	132.2		59.7	65.9	
MEAN						2,512

PRODUCTION

<u>VARIETY</u>	<u>HARVESTING DATE</u>	<u>ORIGIN</u>
1. SI-GADIS	7. 3. 72	Indonesia
2. BAHAGIA	1. 3. 72	West Malaysia
3. I.R. - 5	2. 3. 72	I. R. R. I., Philippines
4. 149/407/-	26. 2. 72	- do -
5. 191/404/-	29. 2. 72	- do -
6. 286/472/-	28. 2. 72	- do -
7. SI/333/-	26. 2. 72	- do -

Where fertilizers were applied the treatments are the same as those in Table II

Rainfall during the period of the foregoing 8 trials was as follows:-

<u>1971</u>	OCTOBER	10.68 in.
	NOVEMBER	12.72 in.
	DECEMBER	13.07 in.
<u>1972</u>	JANUARY	21.31 in.
	FEBRUARY	<u>7.37 in.</u>

TOTAL: 65.15 in.
=====

The areas on which these trials were planted received 2 tons per acre of agriculture lime during the period of land preparation. Insect and disease damage was minimal but some lodging was caused by the very heavy rains during January. Water control was very good and flooding was of very short duration.

In the trials in Table II the varieties Radin China and Pusa Paya yielded consistently well, regardless of soil or

fertilizer treatment. Fertilizer, generally, did not increase yields. With the exception of Karthegal, production was higher on the clay soil.

The performance of the early maturing varieties was disappointing. The response to fertilizer on clay soil was erratic only I.R. showed any considerable increase in yield. As in the late maturing series of trials production on the clay soil was higher than on peat. The varieties Si-Gadis and 191/404/- yielded relatively well.

It is evident from the foregoing that, for the time being, the wet padi varieties which should be grown are the late maturing types. Once fertilizer response is achieved the early maturing types are likely to produce the higher yields.

District Fertilizer Plots

A series of a single replication of 4 fertilizer treatments were planted in the four districts in Brunei State. The plots for each treatment was 30' x 30' and banded to prevent water movement between plots. Spacing was 8'x8", 3 plants per hill. The planting material, Bahagia, was supplied by the Agricultural Station, Kilanas. Results from two districts are given in Table IV. The plots in other districts were unsuccessful for a variety of seasons.

PRODUCTION

TABLE IV
DISTRICT FERTILIZER PLOTS
Yields in lb. padi per acre

DISTRICT	KAMPONG	SOIL TYPE	TREATMENT				TOTALS
			1	2	3	4	
Temburong	Begangan	CLAY	1,815	2,105	1,379	1,271	6,570
	Puni	"	835	980	1,053	653	3,521
	Labu	"	1,924	1,851	1,997	1,525	7,297
	Parit Blang	"	4,538	4,465	4,211	4,029	17,243
	Batu Apoi	"	1,815	1,742	1,960	1,525	7,042
	TOTAL		10,927	11,143	10,600	9,003	41,673
Brunel/ Muara	Tanah Jambu	CLAY	2,568	3,203	2,405	3,285	11,461
	Kapok Jln. Muara	"	1,679	1,334	1,588	499	5,100
	Tanjong Nangka	"	3,285	3,975	4,483	4,701	16,444
	Lambak	PEAT	2,713	3,340	2,605	2,387	11,045
	Babatek	"	NIL	889	1,706	1,488	4,083
	TOTALS		10,245	12,741	12,787	12,360	48,133
TOTALS			21,172	23,884	23,387	21,363	89,806

PRODUCTION

Key to Treatment

Treatment No. 1 - 1970/71 Recommendation.

55 lb/Acre. 14 : 12. 8 : 2 basal dressing
55 lb/Acre Urea 3 weeks after transplanting
55 lb/Acre Urea at heading stage.

Treatment No. 2 - 1971/72 Recommendation.

50 lb/Acre C.I.R.O. basal dressing
55 lb/Acre Urea 3 weeks after transplanting

Treatment No. 3 - Approximate Nutrient Replacement for crop
of 4,000 lb. Padi/Acre.

80 lb Urea/Acre	)	Basal
121 lb CIRP/Acre	)	Dressing
160 lb Muriate of Potash/Acre)		
80 lb Urea/Acre 3 weeks after transplanting		
80 lb Urea at heading stage.		

Treatment No. 4 - No Fertilizer.

The purpose of these plots was (a) to assess the value of fertilizer application on rice, and (b) to compare recommendations promulgated to farmers by the Department for the 1970/71 and 1971/72 seasons. Treatment No. 3 was included as an extra high rate. The results are inconclusive although treatment No. 3 most frequently produced the highest yield per replication followed by Treatment 2. These results are also borne out by observation plots with other fertilizer treatments at Labi. It would appear, therefore, that there is no guarantee that the application will either be beneficial or economic at our present state of knowledge.

ASSESSMENT OF ACCURACY OF PLOT SAMPLING, AGRICULTURAL STATION, SELANGAN

In past season the Department has assessed rice crop yields by sampling plots 33' x 33' in growers fields. Station

PRODUCTION

staff were told to use the same system on plots on the Agricultural Station and after completing the sampling harvest the whole plots so that comparisons could be made. The results are given in Table V.

In only one case was the sample assessment lower than the actual yield of the plot. With nearly all the distribution of data on the higher side of the mean it is evident that the samples were not random and the staff selected, probably unconsciously, the better areas for sampling. The continued use of the present system is therefore not to be recommended.

Pineapples:

Pineapple Observation Trial, Sungai Liang:

An area of peat on the Sungai Liang Agricultural Station was planted to pineapples in 1970. By 1971 the plants had made very little growth, many were pink, completely devoid of any green colouring and dying. The area had been given a dressing of Christmas Island Rock Phosphate at 400 lb/acre at planting. Spacing was 3' x 3'. As the spacing was one third of normal rate it was decided to superimpose a chequer-board observation fertilizer trial on the worst affected area. The water table was about 10" below the surface of the peat. The initial treatments were as follows:-

P = C.I.R.P. (36% P_2O_5) @ 400 lb/ac. at planting.

N = Urea (46% N) @ 100 lb/ac.) about

K_1 = Sulphate of Potash (50% K_2O) @ 360 lb/ac) 1 year after

K_2 = Muriate of Potash (60% K_2O) @ 300 lb/ac) planting.

Lime = Limestone dust at 0, 300 lb, 600 lb, 900 lb per acre. Plot size 9' x 24' - 24 plants/plot.

PRODUCTION

Those plots which received urea responded dramatically. Pink plants changed to a healthy green in a short space of time. It was then decided to give all plots urea which was applied at monthly intervals during wet periods. Towards the end of one dry spell the leaves of a number of plants were reverting to pink colouration but rapidly recovered when urea was applied. The trial was discontinued in July 1972 and the results are given in Tables VI and VII.

Table V

**Assessment of Accuracy of Plot sampling,
1971/72 season**

VARIETY	YIELD/AC IN lb AS PER			X 100
	1/40th ac SAMPLE	WHOLE PLOT	SAMPLE WHOLE PLOT	
1. PADI JONGKOK	4200	3037	138.3	
2. " ASI	4180	1411	296.2	
3. " SI RIBU	5140	2258	227.6	
4. " ANAK NAGA	4830	2677	180.4	
5. " ACHEH PUTEH	3080	1654	186.2	
6. " MAYANG EBOS	2410	2603	92.6	
7. " H.C. 10/4	2520	1483	169.9	
8. " H.C. 24/2	3300	920	358.7	
9. " KUMBAR	1920	1600	120.0	
10. " I.R. 5	2820	1150	245.2	
11. " MASHURI	1400	929	150.7	
12. " I.R. 20	1600	753	212.5	
13. " I.R. 22	1980	1258	157.4	
MEAN	3,029	1672	181.2	

PINEAPPLE FERTILIZER: CHEQUER BOARD OBSERVATION TRIAL.
SUNGAI LIANG AGRIC. STATION, SEPT. 1971-JULY 1972.

TABLE V.I

		NO. OF PINEAPPLES PER PLOT								TOTALS	
	P	PN	PK ₁	PK ₁	PK ₁	PK ₂	PK ₂	PK ₁ K ₂			
TOTAL	16	7	6	17	21	17	15	99			
NORMAL	12	5	5	9	12	15	10	68			
%	75.0	71.4	83.3	52.9	57.1	88.2	66.7	68.7			
NO LIME											
TOTAL	15	12	16	16	12	12	16	99			
NORMAL	14	8	9	9	7	11	13	71			
%	93.3	66.7	56.3	56.3	58.3	91.7	81.3	71.7			
LIME											
TOTAL	12	12	11	11	8	8	18	80			
NORMAL	9	10	10	7	5	5	14	60			
%	75.0	83.3	90.9	63.6	62.5	62.5	77.8	75.0			
LIME											
TOTAL	11	7	14	16	13	12	14	87			
NORMAL	7	5	13	12	11	9	13	70			
%	63.6	71.4	92.9	75.0	84.6	75.0	92.9	80.5			
LIME											
TOTALS	54	38	47	60	54	49	63	365			
NORMAL	42	28	37	37	35	40	50	269			
%	77.8	73.7	78.7	61.7	64.8	81.6	79.4	73.7			

TABLE VII
WEIGHT OF PINEAPPLES PER PLOT

	P		PN		PK ₁		PNK ₁		PK ₂		PNK ₂		PNK ₁ K ₂		TOTALS	
	lb	oz	lb	oz	lb	oz	lb	oz	lb	oz	lb	oz	lb	oz	lb	oz
TOTAL	46	15	23	14	15	0	50	14	63	2	51	7	48	14	300	2
NORMAL	32	8	18	6	12	8	31	6	35	12	44	7	32	6	207	5
%	62.2		77.0		83.3		61.7		56.6		84.4		66.2		69.1	
NO LIME																
TOTAL	46	4	33	14	50	14	51	7	41	9	56	9	46	11	307	4
NORMAL	41	7	23	8	29	10	28	10	24	14	33	7	39	15	221	7
%	89.6		69.4		58.2		55.7		59.8		91.5		85.5		72.1	
LIME/AC																
TOTAL	30	5	31	15	34	0	28	9	20	13	26	0	50	5	219	15
NORMAL	23	5	25	8	31	10	16	7	14	3	15	4	38	13	165	2
%	76.9		70.8		93.0		61.9		68.2		58.7		77.1		75.1	
600 lb																
TOTAL	32	7	15	6	40	15	45	14	37	8	37	11	44	2	253	15
NORMAL	21	1	10	6	35	15	32	4	31	10	26	10	39	2	197	0
%	64.9		67.5		87.8		70.3		84.3		70.6		88.7		77.6	
LIME/AC																
TOTAL	155	15	105	1	140	13	174	12	163	0	151	11	190	0	1081	4
NORMAL	118	5	77	12	109	11	108	11	106	7	119	12	150	4	790	14
%	75.9		74.0		77.9		62.2		65.3		78.9		79.1		73.1	
TOTALS																

PRODUCTION

The Rainfall Record for 1972

District	January	February	March	April	May	June	July	August	September	October	November	December	Total
<u>Brunei-Muara District</u>													
Kluas Station	21.31	7.37	3.13	7.13	5.47	3.31	1.13	1.24	10.91	9.57	13.39	4.65	86.80
Lampas Station	15.35	9.33	3.50	7.23	5.89	5.29	3.45	2.74	13.19	6.01	11.35	7.93	82.94
Mulut Station	17.08	6.78	4.23	5.33	5.26	5.43	1.24	2.23	10.53	9.71	9.66	NIL	77.73
Laaban Station	17.19	7.40	5.56	5.98	4.84	3.56	0.70	1.66	9.45	7.29	17.48	7.64	97.47
Kumbang Pasang	24.65	4.78	10.01	7.07	5.53	5.84	0.97	5.77	9.23	8.39	11.02	5.37	98.32
Semian Berkas	18.44	7.04	4.06	5.95	4.11	5.26	0.65	3.50	6.26	8.84	17.05	6.16	97.51
<u>Tutong District</u>													
Biran Station	16.32	6.13	6.99	5.01	2.86	11.56	1.44	3.03	6.24	11.68	10.12	5.51	92.80
Pekan Tutong	14.44	14.88	6.25	5.05	4.70	13.19	0.86	8.57	6.14	11.37	15.04	6.33	105.80
<u>Belait District</u>													
Mukim Labi	19.53	8.24	8.00	12.04	6.07	12.09	4.26	9.43	10.14	7.19	11.16	5.89	114.74
Sungai Liang	24.50	3.78	3.94	8.08	4.39	11.23	2.56	2.53	5.80	8.87	17.06	6.55	96.93
<u>Temburong District</u>													
Lahu Estate	23.12	10.27	9.06	13.66	7.71	14.45	2.15	28.02	7.93	13.42	21.29	23.42	161.22
Puni Station	14.52	8.42	8.79	11.61	7.01	8.72	3.75	4.55	8.01	18.80	23.00	6.04	123.22
Selangun Station	19.61	6.60	10.14	12.79	10.52	14.16	0.42	9.66	6.58	23.81	22.90	6.80	146.02

PRODUCTION

Drainage and Irrigation Section

The Drainage & Irrigation officer was appointed to the Department in November 1971 and were joined by a Chief Technical Supervisor in January 1972. Previously no section specifically devoted to this work existed within the Department and in consequence there was an initial dearth not only of equipment but also of information. Meteorological data consisted only of rainfall records for various Stations within the State, some extending back for 30 years or more whilst no hydrological data of any kind were available except for recent records in the Tutong River catchment area and records prepared for the abortive Mulaut Irrigation Scheme. The Drainage & Irrigation officer and Chief Technical Supervisor therefore undertook as a priority measure an overall survey of the state of drainage & irrigation activities in the State.

Initially the work of the section was devoted to the design, construction supervision of small scale drainage schemes, requested by farmers on an ad hoc basis. Survey and preliminary design work was also carried out for potential small scale irrigation projects at Rampayoh and Selangan.

Drainage & Irrigation:

Since rice is the staple food the cultivation of paddy is the most widespread farming activity in the state. The water consumption needed for irrigation of the crop is estimated during wet season at between 0.0178 cusec/acre and 0.0122 cusec/acre. As a preliminary measure Drainage and Irrigation Schemes undertaken by the section are 'semi-technical' financially subsidised by the Government and constructed by the farmers themselves. Most of the irrigated fields depend

PRODUCTION

on surface water and rainfall, although some areas are using pumps which are provided for farmers. The Department only subsidised the main drainage and irrigation earth channels. Individual fields are dependent for water supply on the overflow from adjacent fields, and multiple-farm ditches are constructed by the farmers in their individual fields for drainage and irrigation.

The design of the channels at present has to be based on empirical formulae and assumptions due to inadequate Hydrological and Meteorological data.

Hydrology and Meteorology:

Complete Hydrological and Meteorological net-works have yet to be set-up and the section only managed to set-up a skeleton programme within the year 1972; Seventeen standard rainfall recorders are operational in the state together with four automatic rainfall recorders. One automatic river gauge was placed on Rampayoh river and a flood gauge at Selangan in Temburong District. It is hoped that six complete Meteorological and six Hydrological Stations will be set up early in 1973.

Conclusion:

The 'semi-technical' drainage and irrigation service is now in fair condition. The maintenance of drainage and irrigation systems are also at present financially subsidised by the Agricultural Department. In 1972 this section insisted that all channels within paddy fields have to be maintained by the farmers themselves whilst outside the paddy, the maintenance of the drains was assisted by the Department.

The gross cost of 2,500 acres improved drainage and

PRODUCTION

Irrigation works in the State during 1972 was \$62,526.39, equivalent to about \$25 per acre.

District Rainfall Records for 1971 and 1972 are as follow:

<u>Year</u>	<u>Month</u>	<u>Wet Season</u> <u>Av. Rain-</u> <u>fall (in.)</u>	<u>Dry Season</u> <u>Month</u> <u>Av. Ra-</u> <u>infall</u>	<u>District</u>	<u>Remarks</u>
1971	Jan. To February	10.90	March to Aug.	Brunel & Muara.	
	Sept. to December.	11.10			
1972	Jan. to February.	13.06	March to Oct.		3 months of extra dry
	November	13.20	Decem. 5.33		period com- pare to 1971.
1971	Jan. to February	1.17	March to July	Tutong	
	Aug. to December	12.43			
1972	Jan. to February	12.94	March Sept. to		2 months of extra dry
	Oct. to December	10.51			period com- pare to 1971
1971	Jan. to February	11.31	March Sept. to	Kuala Belait	
	Oct. to December	15.33			
1972	Jan. to February	14.01	March Dec. to		3 months of extra dry
					period com- pare to 1971

PRODUCTION

1971 Sept. to December	17.24	Jan. to August	10.17	Temburong	
1972 Jan to February	14.59	March Sept.	8.66		1 month less of dry period compare to 1971
Oct. to Decem.	17.94				

Extension Services

The services rendered by the Extension Division to the farming public can be grouped as follows:

- a. Helping farmers identify and solve their farming problems
- b. Educating farmers on modern and effecient farming techniques
- c. Giving material assistance to farmers by implementing various subsidy schemes.

For administrative purposes, the Extension Division is divided into 4 district sections, each being served by a district agricultural officer. Members of the extension staff carry out their work under the supervision of their district agricultural officer, who is also responsible for the day-to-day administration of his district. A close link is maintained between the Extension Division, Research Division (whose members consist of specialist officers) and members of the farming public. The role of the Extension Division in this trilateral relationship is likened to a bridge which links the Research Division and the farmers. Normally the Extension Division receives and solves farmers' problems. However, there are cases where these problems are passed to the

PRODUCTION

Research Division because of the need for the specialist officers' wide experience and knowledge or research work for their solutions. Solutions are relayed back to farmers by the Extension Division, which processes information in a language readily understood, by farmers.

Staff Touring:

Members of the extension staff were based at the agricultural main offices in the 4 districts. However, in Belait District because of the difficulty of communication, extension officers were also based at Labi, Bukit Sawat and Sungai Liang Agricultural stations. From these points, they paid regular visits to their farmer clients to attend to their agricultural needs and problems. Being employed elsewhere, most farmers met their respective extension officers, either at their places of work, on their farms outside their normal working hours, or the agricultural main offices.

Weather and Crop Situation

The prolonged dry season and high temperatures during the year, adversely affected a wide range of crops. In some areas the continuous dry spell delayed various planting operations in padi, and caused extensive retardation in the growth of plants in nurseries. The overall effect of this was a reduction in yields.

Farm Demonstrations:

The Farm Demonstration is a teaching method employed by the Extension Division for farmers. Two types were used. Method demonstrations were used to teach farmers how to do a particular job, and result demonstrations to teach the result of doing something in a certain way.



An Agriculture Department employee demonstrates the use of a multi purpose Krone Seed Planter that can accomplish the same amount of work (up to 100 acres) as 75 people do in an hour.

PRODUCTION

A demonstration on the growing of watermelons was carried out on farmers' land at Kg. Tungku Gadong based on the specialist officers' recommendations. The demonstration attempted to show farmers in that area correct spacing, fertilizer treatments and pest and disease control. The demonstrations were conducted on 3 separate plots belonging to 3 different farmers.

A simple observational trial on the control of beanfly on long-beans conducted on a farmer's land at Kg. Tanah Jambu, under the supervision of the Entomologist, and replicated in other districts, also served as a demonstration to farmers of the result of using insecticides. It was clearly seen by farmers in those areas that crops on 2 plots sprayed with 2 different insecticides were far superior both in quality and quantity to those on the unsprayed control plot.

Two areas at Kg. Luagan Dudok and Kg. Penanjong, Tutong, were selected for a demonstration on fertilizer treatments of wet padi using local varieties. The demonstration started off very well, but the sudden advent of dry weather in early December, gave rise to crop failure. The demonstration was replicated in other districts. In Temburong District the demonstration carried out at 5 Kampongs showed that all treated plots gave higher yields than untreated plots. However, in Brunei/Muara District, results were a bit erratic, but on the whole, treated plots gave higher yields than untreated plots. As in Tutong District the demonstration in Belait District was affected by crop failure, due to dry weather.

Open Days:

Kilanas agricultural station was opened to the farming public during the padi harvest on Sunday, 5th March, 1972. This was to provide opportunities for padi farmers to learn from members of the extension staff, and specialist officers, who staged their own exhibits, relevant techniques in rice growing. Commercial firms dealing in agricultural chemicals, machinery and equipment, who were invited to participate displayed and demonstrated their wide range of products for the benefit of the visiting farmers. Farmers were also given the opportunity to see how rice growing is carried out in other countries through film shows.

Similar open days were organised at Lumapas station on 17th March, 1972, and Labi Station on 15th March, 1972.

Off-season rice was grown at Kilanas Station following the main crop of 1971/72. This was used as an opportunity by the Extension Division to introduce the subject of off-season rice to Brunei farmers, which is something new to them, although they may have heard a lot about off-season rice being grown in other rice-growing countries. So a group of relatively progressive padi farmers were invited to Kilanas Station during the harvest of the off-season rice crop on 21st August 1972. They were briefed on the off-season crop grown at the station by the officer-in-charge and were also given the opportunity to see harvesting, stacking, threshing operations. Among other things, the advantages and disadvantages of the off-season crops and their practicability in Brunei were discussed in the presence of specialist officers. It was generally agreed that first class management and good water control are necessary for successful growing of off-season rice crops. The same exercise was conducted for another group of padi farmers on 24th August, 1972.

Farmers at Kg. Tanah Jambu invited members of the Extension staff and specialist officers to their holdings on 26th September, 1972 for the purpose of looking into their problems at close quarters, and giving on the spot advice to remedy them. Of no less importance was the discussion which followed, where the guests had the opportunity to listen to the 'farmers side of the story' with regard to their problems.

Members of the Sungai Liang Animal and Poultry Farmers' Association invited members of the extension staff and specialist officers to their farms on 14th November 1972, for the purpose of looking into and overcoming the serious problems of wide-spread premature death of their citrus and pepper plants. The condition was due to root rot caused by *Phytophthora* sp. on both crops and also in addition a bark canker due to *Phytophthora* which was also present on citrus. The complete digging up and burning of dead and dying plants, and improvement of drainage of the area was advised. It was also recommended that a two year follow should be initiated and the area planted up to a leguminous cover crop, a leguminous cash crop or vegetables, prior to replanting of the crops.

Courses:

A mobile extension team consisting of an Assistant Agricultural Officer, a Senior Agricultural Assistant, a member of the Veterinary Section, and 2 Home Demonstrators was responsible for conducting short courses for farmers and their womenfolk in their villages.

The Home Demonstrators gave a short course to expectant mothers at Kg. Saba on 8th February 1972. The course on 'Nutrition for expectant mothers' was conducted at the request of the Medical and Health Department.

PRODUCTION

A course on vegetable growing and on chicken and goat rearing was conducted for members of Kg. Semabat long-house from 17th to 23rd April 1972. A course on nutrition, health, sanitation and handicrafts was also conducted by the Home Demonstrators for lady members of the long-house. They also had the opportunity to see demonstrations on the preparation of food from locally available produce.

From 21st to 22nd April, 1972, the Home Demonstrators conducted a course on health, sanitation and handicrafts to lady members of Kg. Lepong Baru longhouse.

Follow-up visits by the mobile extension team to Kg. Semabat and Kg. Lepong Baru were made from 26th to 28th June 1972.

Other courses were conducted by the Home Demonstrators in the following villages:

Kg. Bukit Sawat, on 8th June 1972

Kg. Tanah Jambu, from 24th to 28th August 1972

Kg. Laid Lakang from 21st to 30th October, 1972.

A refresher course was organised for all members of the Extension Division and other field officers from the rank of Senior Agricultural Assistant down to Rubber Inspector. The course was designed to keep their field knowledge up-to-date. The courses was run once a week from 10th July to 21st September 1972. Lectures were delivered by senior members of the extension staff and specialist officers.

Agricultural Shows:

Agricultural shows at district level were held during the year as follows:-

PRODUCTION

<u>District</u>	<u>Date</u>	<u>Place</u>
Tutong	29.7.1972	Muda Hashim Malay School Hostel
Temburong	4.8.1972	Bangar Civic Hall
Belait	23.9.1972	Anthony Abell College Girls' Hostel, Seria.
Brunei/Muara	30.9.1972	Kilanas Station

The annual shows were held with the following aims, amongst others, in mind:

- a. To give farmers from different areas, the opportunity to meet for the purpose of exchanging ideas, knowledge, and experience.
- b. To bring to the attention of farmers through exhibits staged by specialist and extension officers the types of services the department renders to them, thereby enabling farmers to make full use of these services.
- c. To inform farmers through exhibits staged by commercial firms the types of agricultural chemicals, machinery and equipment currently available in local shops.
- d. To enable the department to make a rough assessment of farmers progress in farming, by looking at the range and quality of exhibits.

Visits to Agricultural Stations:

Visits were organised on request for members of the Royal Brunei Police Force, students and village headmen to a number of the main agricultural stations. Visitors were briefed on and given the opportunity to see current work carried out at these stations.

PRODUCTION

Station Visited	Number of Visits	Total Number of Visitors
Kilanas	6	145
Luahan	10	315
Jerudong	10	300
Mentiri	3	80

Radio broadcast for farmers:

Radio is one of the mass media being used by the Extension Division in disseminating agricultural information to farmers. A half-hour programme, organised by the department's Publicity Officer and members of the staff of Radio Brunei, could be heard once a week from the Malay Language Section of Radio Brunei. Reorganisation work to make the farming programme more interesting and effective has been carried out and awaits implementation.

Land Inspection:

The department, in conjunction with the Forestry Department is responsible for supplying to the Land Department relevant informations necessary for considering the approval of the following:

- a. Change of conditions of EDR land
- b. Subdivisions of EDR land
- c. Applications for TOL land

See Appendix A for breakdown of land inspected during the year.

Subsidy Schemes:

Members of the extension staff were responsible for

PRODUCTION

implementing, supervising and following-up the department's various subsidy schemes.

a Buffaloes

The scheme was introduced to improve the quality of animals in the state. A total of 66 imported buffaloes (40 males and 26 females) have been issued free of charge to selected farmers since 1968. No animals were issued to farmers during the year. Appraisal of this long range programme will be made in 1974.

b Cattles

The scheme was started to improve local stock, where crossbred Santa Gertrudis bulls were sold to cattle farmers at \$500.00 each. The cross-bred bulls were produced at the department's Animal Breeding Farm, Jerudong, by crossing Santa Gertrudis bulls with Kedah heifers, so far ten bulls have been sold. During the year, 1 bull was sold to a farmer in Brunei/Muara District, and another to a farmer from Temburong District.

c Barbed wire:

Barbed wire was sold for fencing at half price to buffalo and cattle farmers. The amount sold during the year is as follows:

Tutong District	-	150 rolls
Brunei/Muara District	-	94 rolls
Belait District	-	-
Temburong District	-	10 rolls

PRODUCTION

d. Fertilisers

Fertilizers for padi, vegetables and fruit trees were sold to farmers at half price. The types and number of bags sold during the year is as follows:

Tutong District

CIRP	-	197 bags
Urea	-	41 bags
Rustica Yellow	-	28 bags
NPK (12:12:8:2)	-	136 bags

Belait District

CIRP	-	74 bags
NPK Yellow	-	27 bags
Urea	-	37 bags
Muriate of Potash	-	5 bags

Temburong District

Urea	-	104 bags
CIRP	-	20 bags
Nitro-Pro-Mix (15:15:15)	-	137 bags

Brunei/Muara District

Urea	-	306 bags
CIRP	-	350 bags
NPK (Yellow)	-	470 bags
NPK (Green)	-	495 bags
Muriate of Potash	-	230 bags

PRODUCTION

e. Power Tillers:

Power-Tillers were rented out to padi and vegetable farmers at nominal rates. Owing to difficulties in obtaining spare parts, the number of machines rented out during the year was greatly reduced. This had a direct effect in reducing the acreage of padi grown in the state during the year. The machines are wholly rented out to padi farmers during the padi season, and vegetable farmers only benefit from the service as soon as the padi season is over. The total acreage of land cultivated during the year for padi and vegetables is as follows:

Tutong District	-	90.25 acres
Belait District	-	29.8 acres
Temburong District	-	30 acres
Brunei/Muara District	-	227 acres
Total		<u>377.05 acres</u>

Fungicides:

These were issued free to farmers on request. The types and amount issued during the year is as follows:

	<u>Temburong</u>	<u>Belait</u>	<u>Tutong</u>	<u>Brunei/Muara</u>
Benlate	1 lb 15 ozs	1 lb	4 lbs	6 lbs
Aretan	9 packets (288gms)	-	-	-
Ceresan	168 packets (1008 gms)	-	1000 packets (6000 gms)	2100 packets (12,600 gms)
Kocide	13 lbs	9 lbs	2 lbs	-
Dithane M-45	48 lbs 1 oz	-	-	1½ lbs
Captan	-	2 lbs	-	-
Manzate	-	2 lbs	-	-

N. B. 1 packet Aretan weighs 32 gms, and Ceresan 6 gms.

PRODUCTION

g Pesticides:

These were also issued free to farmers on request.
The types and amount issued during the year is as follows:

	Tutong	Temburong	Belait	Brunei/Muara
K.G. 22	10,000 cubes	2725 cubes	5035 cubes	43375 cubes
Dimecron	25 galls	6 galls	10 $\frac{3}{4}$ galls	5 $\frac{3}{4}$ galls
Sevin	50 lbs	62 lbs 1 oz	30 lbs	10 lbs
Sevidel	10 lbs	-	69 lbs	-
Dipterex	22 lbs	-	-	-
DDT	25 lbs	99 lbs 2 ozs	8 lbs	2 $\frac{1}{2}$ lbs
Slugit	35 lbs	-	1 lbs	-
Malathion	-	3 $\frac{1}{2}$ galls	-	2 galls
Agrocide	-	100 lbs 1 oz	15 $\frac{1}{4}$ lbs	57 lbs
Dieldrex	-	1/6 gall	1 gall	-
Albolineum	-	-	$\frac{3}{4}$ gall	-
Lannate	-	-	$\frac{1}{2}$ lb	-
Zinc phosphide	-	-	-	12 lbs

h Seeds:

Vegetable and padi seeds were issued free to farmers on request. The types and amount issued during the is as follows:

	Temburong	Belait	Tutong	Brunei/Muara
Cucumber	2 lbs 3 ozs	-	-	8 lbs
Mustard (Sawi)	2 lbs 7 ozs	-	-	-
Wax gourd	1 lb 10 ozs	-	-	-
Brinjal	1 lb 4 ozs	-	-	5 1/3 lbs
Longbeans	-	-	5 lbs	23 lbs
Loofah	-	-	-	16 1/3 lbs
Angled beans	-	-	-	2 2/3 lbs
Padi	-	103 gantangs	30 g	71 g

i Drainage and Irrigation

One of the services rendered by the department to farmers is subsidising the drainage and/or irrigation works carried out in their fields. In addition the department provides free services of surveying and planning which are necessary prior to the actual construction of drainage and/or irrigation channels which the farmers carry out themselves. Many requests were received for these services during the year, particularly from padi farmers. See Appendix B.

J. Veterinary Services

The Veterinary Extension officers run various services free of charge for livestock farmers. These services can be grouped as follows:

- a. Prophylactic vaccinations against known epizootics such as New Castle Disease, Fowl Pox etc.
- b. Routine treatment of animals such as deworming.
- c. Attending to simple diseases and infections such as coccidiosis, ectoparasites etc.
- d. Castrations
- e. Advice on animal health and husbandry

Vaccines for pigs are administered free of charge by a veterinary extension officer. The costs of these vaccines are borne by the farmers themselves. See Appendix C.

PRODUCTION

APPENDIX A Number of Land Inspections

TYPE	Brunei/Muara	Tutong	Belait	Temburong
State land application	2*	-	-	-
Change of conditions of EDR land	32	-	-	-
Subdivisions of EDR land	1	-	-	-
Applications for TOL land	95	101**	106**	91

* - 1 for building a mosque, and another as compensation for the government take over of a piece of EDR land.

** - required for cash crops and livestock farming.

*** - 90 applied for vegetables, 8 for hill padi, 5 for wet paid and 3 for miscellaneous crops.

PRODUCTION

APPENDIX B

Drainage or Irrigation Works Being Subsidised

BRUNEI/MUARA

Locality	Length of Channel	Type
Mata2	48½ chains	Drainage
Tg. Bunot	75 chains	Drainage
Buang Kepayang	31½ chains	Drainage
Sungai Balai	150 chains	Irrigation
Sengkurong	9 chains	Drainage
Sungai Sangai	166½ chains	Irrigation
Sungai Bunga	108 chains	Irrigation
Lumapas	45½ chains	Drainage
Sungai Tilong	65 chains	Irrigation
Selayon Tegar	135 chains	Drainage
Sungai Matemba	40 chains	Irrigation
Parit Paya Matemba	40 chains	Irrigation
Sungai Langongsai	89 chains	Irrigation
Sungai Mulaut/Tampoi	340 chains	Irrigation
Lambak	70 chains	Drainage
Tg. Nangka	80 chains	Drainage
Batu Ampar	19 chains	Irrigation
Mulaut	195 chains	Irrigation
Bukit Bunga	50 chains	Irrigation
Sg. Bebihon	95 chains	Irrigation
Kg. Sengkurong	58½ chains	Drainage
Sg. Salambigar	115 chains	Irrigation
Kg. Salambigar	25 chains	Drainage
Kg. Kilanas	24 chains	Drainage

PRODUCTION

Temburong

Kg. Parit (construction of a weir)		Irrigation
Piasau2	-	Survey
Bokok	-	Survey

Belait

Momong	-	Survey
Rampayoh	-	Survey
Sukang	-	Survey

Tutong

Penanjong	36 chains	Drainage
Sinaut	50 chains	Drainage
Kuala Ugar	95 chains	Drainage
Keriam	80 chains	Drainage
Rambai	110 chains	Drainage
Lamunin	80 chains	Drainage
Luagan Dudok	49 2/3 chains	Drainage
Pengkalan Mas	49 chains	Drainage

APPENDIX C

Detail of Veterinary Services

Total Prophylactic Vaccinations of Chickens:

	Ranikhet standard	Ranikhet 'F' Strain	Fowl Pox
Brunei/Muara	91,071	67,093	68,760
Belait	39,200	17,220	89,010
Tutong	32,130	70,000	61,400
Temburong	343	-	-

PRODUCTION

Treatments of Cattle Buffaloes: :

	<u>Brunei/Muara</u>	<u>Belait</u>	<u>Tutong</u>	<u>Temburong</u>
Worms	489 animals	26	265	10
Scabs	417	58	230	-
Eye diseases	33	1	25	4
Milk fever	125	6	65	4
Wounds	85	3	20	2

Treatments of Goats:

	<u>Brunei/Muara</u>	<u>Belait</u>	<u>Tutong</u>	<u>Temburong</u>
Worms	177 animals	7	75	-
Scabs	71	7	10	-
Eye diseases	27	-	10	1
Wounds	22	7	8	-
Others	39	-	7	-

Treatments of Chickens:

	<u>Brunei/Muara</u>	<u>Belait</u>	<u>Tutong</u>	<u>Temburong</u>
Worms	48,609 animals	-	3,250	4,071
Chronic Respiratory diseases	17,961	9,950	10,000	65
Coccidiosis	45,828	12,969	14,177	1,440
Fowl pox	9,606	-	260	130
Pneumonia	481	635	240	120
Wounds	159	5	120	101

PRODUCTION

Treatments of Pigs:

	<u>Brunei/Muara</u>	<u>Belait</u>	<u>Tutong</u>	<u>Temburong</u>
Worms	755 animals	1611	19	66
Scabs	-	183	-	-
Milk fever	5	18	10	-
Wounds	59	41	46	-
Scouring	500	212	140	-

Treatments of dogs and Cats:

	<u>Brunei/Muara</u>	<u>Belait</u>	<u>Tutong</u>	<u>Temburong</u>
Worms	177 animals	23	-	-
Scabs	83	13	-	-
Distemper	270	4	-	-
Compound fractures	290	7	-	-
Leptospirosis	166	-	-	-

Castrations :

	<u>Brunei/Muara</u>	<u>Belait</u>	<u>Tutong</u>	<u>Temburong</u>
Cattle & buffaloes	5 animals	5	-	-
Goats	2	-	-	-
Dogs and cats	135	-	-	-

PRODUCTION

VETERINARY SECTION

The State maintained its record of freedom from major animal diseases during the year under review and no case of foot and mouth disease, rinderpest, anthrax, black quarter, swine fever or rabies was detected. The strict importation policy, the insistence that importations may be made only from certain countries and the rigid certification required for animals imports have greatly reduced the chance of serious infections being introduced.

The main duties of the Senior Veterinary Assistants, Veterinary Assistants and Livestock Inspectors posted in the various districts for Veterinary Extension Services are:

- i) Prophylactic vaccinations against known epizootics such as New-Castle Disease, Fowl pox, etc.
- ii) Routine treatments such as deworming.
- iii) Attending to simple diseases and affections such as coccidiosis, ectoparasites etc.
- iv) Castrations
- v) Advice on rearing of livestock and treatment of disease etc.
- vi) Supervision and follow up of bulls and buffaloes issued under the subsidy schemes.

The Veterinary Staff working within their own districts toured extensively visiting farmer's holdings and areas where cattle, buffaloes and poultry are kept. The veterinary Officer toured the four districts with the Veterinary staff on inspection and also to check the state of the bulls and buffaloes issued under the subsidy schemes.

PRODUCTION

Laboratory work

The arrival of the trained Chief Laboratory Technician made it possible to carry out most of the routine diagnostic work necessary for the treatment of animals, The following is a summary of diagnostic work carried out during 1972:

1. Haematological examinations	-	184
a) Positive for Babesia	-	13
b) Pullorum	-	18
2. Faeces samples examined	-	64
a) Positive for Coccidiosis	-	16
b) Positive for helminth eggs	-	7
3. Skin scrapings examined	-	11
a) Positive for staph.	-	5
b) Positive for mites	-	4
4. P.M. Examinations		
a) Cattle - 9 - Castrodiscus	-	1
Babesia	-	1
5. b) Buffaloes - 2		
c) Poultry - 77 - coryza	-	28
coccidiosis	-	20
BWD	-	21
d) Dogs - 5		
Cats - 6		
Birds - 1		
6. Cultural examinations of specimens from the field	-	
34. No disease causing organisms isolated.		

Animal Health and Disease control

A. Diseases of Animals

1) Cattle and Buffaloes

No serious diseases occurred amongst cattle and buffaloes in the Kampongs but at the Shell Agricultural Centre, Sinaut 16 cattle ($\frac{1}{4}$ bred Brahman and Aberdeen Angus) were showing clinical evidence of Babesiosis which was later confirmed by haematological examinations. All the affected animals responded to treatment and movement of cattle from the stations as prohibited until condition was cleared. Ecto and endoparasitic infections were common in Kampong animals and regular control measures were carried out.

2) Goats

Contagious exthyme, mange and worm infections were seen in a few cases and appropriate treatments given.

3) Poultry

Since 1970 there has been no outbreak of New Castle Disease (Ranikhet Disease). The incidence of Fowl pox has reduced considerably. Coccidiosis, chronic Respiratory disease and coryza are very common. However, these conditions responded to treatments with Sulpha drugs and broad spectrum antibiotics. Mareck's Disease is frequently encountered in exotic birds and treatment with broad spectrum antibiotics produced some success.

PRODUCTION

4) Pigs.

Piglet diarrhoea, virus pneumonia combined with lung worm infestation and Aseariases are common. These conditions responded successfully to treatments with vermifuges and broad spectrum antibiotics.

5) Dogs and Cats.

Distemper in dogs responded to early treatment with antibiotics. Combined Distemper, Hard pad, Leptospira immunisation is popular amongst dog owners. A wide variety of medical and surgical cases were treated at the Small animal Surgeries at Bandar Seri Begawan and Kuala Belait. These include mange, pneumonia, heart worm infestations, helminth infestations, leptospirosis, pyometra, fractures etc.

B. Number of Animals Treated during 1972 ?.

1 Cattles and Buffaloes:

Worm infestations	-	790
Ectoparasites	-	705
Conjunctivites	-	63
Milk fever, Dystokia)	-	200
Bloat etc.)	-	
Wounds	-	110
		<hr/>
		1,868
		=====

2. Goats :

Worm infestations	-	259
-------------------	---	-----

PRODUCTION

Ectoparasites	-	88
Conjunctivities	-	37
Wounds	-	38
Others	-	48
Total	=	<u>470</u> =====

3. Poultry :

Worms	-	55,930
C.R.D.	-	37,976
Coccidiosis	-	74,414
Fowl Pox	-	9,996
Coryza	-	1,476
Wounds	-	385
Total	=	<u>180,177</u> =====

4. Pigs :

Worms	-	2,431
Mange	-	183
Milk Fever	-	33
Wounds	-	146
Piglet Diarrhoea	-	852
Total	=	<u>3,759</u> =====

5. Dogs and Cats :

Worms	-	140
Mange	-	96
Distemper	-	274

PRODUCTION

Wounds, Fractures	-	297
Leptospira and other) forms of pyrexia)	-	166
		<hr/>
Total	=	973
		<hr/> <hr/>

Number of dogs destroyed	-	387
Number of dogs castrated/spared	-	135

6. Castrations :

Buffaloes	-	6
Cattle	-	4
Goats	-	2
		<hr/>
Total	=	12
		<hr/> <hr/>

C. Prophylactic Vaccinations:

<u>District</u>	<u>Ranikhet Standard</u>	<u>Ranikhet 'F' Strain</u>	<u>Fowl Pox</u>
Brunei/Muara	91,071	67,093	68,760
Belait	39,200	17,220	89,010
Tutong	32,130	10,000	61,400
Temburong	343	-	-
	<hr/>	<hr/>	<hr/>
	<u>162,744</u>	<u>94,313</u>	<u>219,170</u>

D. Imports of Animals into Brunei:

Buffaloes	-	2,852
Cattle	-	124
Goats	-	123

PRODUCTION

Pigs	-	2,310
Day old chicks	-	734,634
Ducklings	-	38,080
Goslings	-	1,738
Fighting cocks	-	527
Pet Birds	-	533

E. Exports from the State of Brunel:

Dogs	-	22
Cats	-	4
Civet Cat	-	1
Mouse deer	-	3
Monkeys	-	8
Poultry	-	18
Fighting cocks	-	14
Pet Birds	-	39
Snakes	-	3

F. Animals Slaughtered

Districts	<u>Buffaloes</u>	<u>Cattle</u>	<u>Pigs</u>
Brunei/Muara	2,451	107	5,863
Belait	616	48	6,004
Tutong	70	8	142
Temburong	17	3	50
Total =	<u>3,154</u> =====	<u>166</u> =====	<u>12,059</u> =====

PRODUCTION

G. Average market prices of Livestock and Livestock Products:

DISTRICTS

	Brunei/Muara	Belait	Tutong	Temburong
	<u>Brunei/Muara</u>	<u>Belait</u>	<u>Tutong</u>	<u>Temburong</u>
Buffalo) L.W. per) head.)	\$500/=	\$700/=	\$500/=	\$400/=
		\$800/=	\$800/=	\$500/=
Buffalo) meat per) kt.)	\$2.80 \$3.00	\$3.80	\$3.00	\$3.00
Cattle) L.W. per) head.)	\$300/=	\$550/=	\$300/=	-
	\$600/=		\$600/=	-
Beef per) kt.)	\$3.00	\$4.00	3.00	-
Goat per) head)	\$30/=	-	-	-
	\$60/=			
Mutton) per kt.)	\$4.00	-	\$3.60	-
Pig per) picul)	\$170/=	\$170/=	\$170/=	-
	\$180/=			
Pork per) kt.)	\$1.00	\$2.20	\$4.00	-
	\$2.00	\$3.50		
	\$3.40			
Poultry) per kt.)	\$2.30	\$2.30	\$2.20	\$2.30
	\$2.50	\$2.60		
Hen's eggs) per egg)	15-17 ¢	16½ ¢	20 ¢	20 ¢

PRODUCTION

Animal Husbandry :

a) Buffaloes

These semi-aquatic animals are commonly seen throughout the State and usually owned by Malays in small numbers. A few them are used for rice cultivation, for meat and quick cash returns in time of emergency. It is thought that there are approximately 15,000 buffaloes in the State. To assist the natural increase of the national stock of buffaloes, 66 imported buffaloes (40 males and 26 females) were issued to selected farmers in 1968/69. This is a long range programme and results are difficult to assess.

b) Cattle :

There are approximately 2,271 cattle in the State and to improve this local stock Kedah x S.G. bulls have been sold to cattle farmers at a cost of \$500/- per bull. These cross-bred bulls are produced at the Department's Animal Breeding Farm at Luahan/Jerudong. So far ten bulls have been sold, but results are not yet to hand and performance of improved stock is dependent on improved husbandry practices by owners.

c) Poultry

The commercial sector of the poultry industry continued to make progress. It is estimated that there are nearly 90 commercial farms housing about 70,000 layers producing approximately 15 million eggs per year. The stock for these farms are mainly imported as day old chicks from Singapore and the main breeds kept are Hy-line, Golden Comet, Red Cornish and

PRODUCTION

Austrial Whites. The Commercial Poultry Farmers parctise scientific methods of feeding and management and at present all the feeds are imported. The State is now 60% self sufficient in egg production, but continues to rely on imports for some 750, 000 day old chicks each year.

d) Pigs .

The commercial pig industry continued to develop. In many instance the commercial poultry farmer (Chinese) is also a Commercial pig farmer. There are now well over 100 farms housing a total of 8,000 breeders. The popular breeds are Tamworth, Berkshire, Landrace, Large Whites and Chinese Black. Out of the total of 12,059 pigs slaughtered in the State during 1972 only 2,310 heads came from the imported stock. However much of the necessary feeding stuffs continued to be imported.

Animal Breeding Farm, Jerudong:

a) Santa Gertrudis Cattle ,

6 animals were imported in 1968 (4 heifers and 2 bulls). The present stock is 2 adult bulls, 5 adult cows, 4 young bulls and 4 heifers. The health of the herd has been satisfactory.

b) Santa Gertrudis x Kedah Crosses .

**Number of first cross cattle so far born at Jerudong
Kedah Cows 40**

Bulls	Heifers	Total
30	40	70

PRODUCTION

Selected bulls sold to farmers @ \$500.00 each - 10
Culled animals - 3 bulls, 4 heifers.
Remaining Stock at Jerudong - 17 bulls, 36 heifers.

c) Kedah Cattle

There are herds of Kedah and local Kedah type cattle maintained at Luahan and at the Government Estate at Labu. These are currently being crossed with imported bulls to extend the cross breeding programme.

The herds consist of:

	Luahan	<u>Labu</u>
Adult bulls		1
Adult cows		17
Young bulls		9
Heifers		29
Total -	<hr/>	<hr/> 56

d) Bali Cattle

A small herd of Bali cattle is maintained at Birau. This herd is being expended with a view to utilisation of range grazing areas and will be transferred to Luahan, shortly where observations will be carried out.

Adult bull	1
Adult cows	14
Young bulls	8
Young heifers	13
Total	<hr/> 36

PRODUCTION

e) Sheep

A flock of 40 Kelantan sheep is kept at Luahan and is being studied on improved pasture for its suitability for introduction to Brunei's agriculture.

f) Artificial Insemination Unit .

The experimental Artificial Insemination Unit at Jerudong inseminated 53 cows (50 in Jerudong, Luahan and 3 in Mukim Labi) with semen collected from pure S.G. bulls. So far 28 cross bred calves have been.

g) Experimental hatchery, Jerudong.

An experimental hatchery to study the economics of day old chick production - both layers and broilers - was established at Jerudong during the year. The breeding stock consisted of the following :

Golden Comet (Layers)	-	120
White Leghorn (Layers)	-	110
Red Cornish (Broilers)	-	110

Results will be forth coming only in April-May 1973 when the birds start to lay.

PASTURE

The main base for the section is at Luahan (Jerudong) Station. After the arrival of Pasture Research Officer Jerudong Station ceased to exist as a separate unit. The two stations now came under one name - Luahan (Jerudong). Luahan is 14 miles from the main office of the Agricultural Department.

PRODUCTION

Works Undertaken 1972:

In the seven months since the Pasture Research Section started some experiments have been done at Luahan (Jerudong). The various experiments were given the following Serial Numbers:

PRO/1/1972

PRO/2/1972

PRO/3/1972

PRO/4/1972

and details of their aims and results are included at the end of this section of the report. Apart from these experiments, various other activities have been carried out by the Pasture Research Officer, for the development of the Station. The pasture area within the stations was initially not enough to feed the cattle properly.

By mid-December more than fifteen acres of new pasture has been developed. The development was either in the establishment of new areas or by rejuvenating the older and unproductive paddocks. However, most of the new pasture areas were provided by clearing and developing new areas within the stations. By then the problem of inadequate feed was solved and the condition of the cattle was much better.

Equipment for the assessment of the productivity of the various pasture and various species of grass and legumes was non-existent. It is hoped that during next year - 1973 - the section will be fully equipped in this respect.

PRODUCTION

Experimental work

Serial No. PRO/1/1972

Objective: To determine fertilizer requirements within Luahan/Jerudong Station, on grassland.

Materials Used: The area in question is the paddock of pangola grass (— 50% Stand) adjoining the Office building in Luahan.

Fertilizers:	1. Ground Magnesian Limestone	= L1
	2. Limestone Dust	= L2
	3. Basic Slag (16% $P_2 O_5$)	= P1
	4. CIRP (36% $P_2 O_5$)	= P2
	5. Double Super (43% $P_2 O_5$)	= P3
	6. Muriate of Potash (60% $K_2 O$)	= K1
	7. Sulphate of Potash (50% $K_2 O$)	= K2
	8. Urea (46% N)	= N1

Rates Used: Nitrogen 50 lb/acre & 100 lb/acre
 $P_2 O_5$ 100 lb/acre & 200 lb/acre
 $K_2 O$ 100 lb/acre & 200 lb/acre
Lime 2 tons/acre.

Location & Layout:

The area used was the adjoining paddock to the Office building in Luahan. The layout used was 9 plots x 7 plots of 20' x 20' as in diagram.

Description:

A checker-board of 9 plots x 7 plots of 20' c 20' plots was set up immediately after the whole area was moved down

PRODUCTION

to about 2-3 inches. Application of fertiliser according to the design treatments indicated was by hand broadcasting.

Result and Observations:

(Date of this observation 6th July, 1972)

(Date of application: 6th June, 1972)

A few days after the fertilizer application it was noted that the local grass - mainly *Axonopus* spp - were 'burnt' or scorched whereas the *Pangola* was not. This may have been due to a two week dry spell following treatment. It was observed that in plots showing greatest response the *Pangola* grass tended to suppress the local *Axonopus* grass.

Observations May be Summarised:

1. Lime did not show any visual response.
2. P_2O_5 alone did not show any response.
3. K_2O alone did not show any response.
4. Nitrogen showed a remarkable response and the higher levels i.e. 50 lb/acre and 100 lb/acre - showed greater response. However the response was not as striking as the complete NPK plots, which gave us the most striking response.
5. The plots of different forms of P or K also did not give any response.
6. The different levels of P and K also did not produce any visual response.
7. However the combination of P & K did produce and showed a small response.
8. But the main response occurred on the plots of the full NPK treatments.

PRODUCTION

In these plots:

P_1 2NK ₁	P_1 2NK ₂
P_2 2NK ₁	P_2 2NK ₂
P_3 2NK ₁	P_3 2NK ₂
2P ₃ 2NK ₁	2P ₃ 2NK ₂

There were no visual differences between the different forms of P either P_1 or P_2 or P_3 and similarly K - either K_1 or K_2 . Also the same with the different levels of P_3 i. e. P_3 and 2P₃. So in these combinations there must be interaction between the three elements for P alone or K alone did not give any visual response. However Nitrogen on its own and with either P or K did produce some responses but not as striking as the complete NPK plots. The heights measured was:

- a. In N_1 (i.e. 50lb/acre) average height of the sward
= 10-12"
- b. In 2N₁ (100 lb/acre) average height of the sward
= 12-15"
- c. In L_1 N_1 - Comparable to N_1
 L_2 N_1 - " " N_1
 L_1 2N₁ - " " 2N₁
 L_2 2N₁ - " " 2N₁
- Similarly with N_1 and 2N₁ together with P & 2P pr K & 2K
- d. In the full NPK plots the average height was as high as 18-20"

Feeding Observations:

Twelve beasts (cattle) were let in on the morning of 6th

PRODUCTION

July, 1972. The animals went straight to the "green" plots. This suggests that the "green" plots are more palatable and more attractive to them than the other plots.

Conclusions & Recommendations

The trials proved the need for application of all these water plant nutrients to pastures at Luahan.

LAYOUT DIAGRAM: EXPERIMENT PRO/1/1972

(O)	(O) 20'	(N ₁)	(2N ₁)	(K ₁)	(2K ₁)	(K ₂)	(2K ₂)	(2NK ₁)	(2NK ₂)
(O) 20'	(OO)	ON ₁	O2N ₁	OK ₁	O2K ₁	OK ₂	O2K ₂	O2NK ₁	O2NK ₂
(L ₁)	OL ₁	L ₁ N ₁	L ₁ 2N ₁	L ₁ K ₁	L ₁ 2K ₁	L ₁ K ₂	L ₁ 2K ₂	L ₁ 2NK ₁	L ₁ 2NK ₂
(L ₂)	OL ₂	L ₂ N ₁	L ₂ 2N ₁	L ₂ K ₁	L ₂ 2K ₁	L ₂ K ₂	L ₂ 2K ₂	L ₂ 2NK ₁	L ₂ 2NK ₂
(P ₁)	OP ₁	P ₁ N ₁	P ₁ 2N ₁	P ₁ K ₁	P ₁ 2K ₁	P ₁ 2K ₂	P ₁ 2K ₂	P ₁ 2NK ₁	P ₁ 2NK ₂
(P ₂)	OP ₂	P ₂ N ₁	P ₂ 2N ₁	P ₂ K ₁	P ₂ 2K ₁	P ₂ 2K ₂	P ₂ 2K ₂	P ₂ 2NK ₁	P ₂ 2NK ₂
(P ₃)	OP ₃	P ₃ N ₁	P ₃ 2N ₁	P ₃ K ₁	P ₃ 2K ₁	P ₃ K ₂	P ₃ 2K ₂	P ₃ 2NK ₁	P ₃ 2NK ₂
(2P ₃)	O2P ₃	2P ₃ N ₁	2P ₃ 2N ₁	2P ₃ K ₁	2P ₃ 2K ₁	2P ₃ K ₂	2P ₃ 2K ₂	2P ₃ 2NK ₁	2P ₃ 2NK ₂

PRODUCTION

The main element which gave a response was Nitrogen and especially in the presence of P and K. Preliminary recommendations are to use complete fertilizer with N, P and K, and with top dressing of Nitrogen after every grazing.

Limitations of the Trial:

1. There were only three days of rain during the whole period of the trial.
2. The assessment was only visual. No equipment available to measure grass productivity directly.
3. The area of each plot was small.
4. The method of application was by simple hand broadcasting.
5. The 'levels' especially for Nitrogen used were limited i.e. 50 lbs/acre and 100 lbs/acre only.
6. There was no 'discard' area between plots.

Keys to the Diagram

O	=	Nothing (control)
L ₁	=	Ground Magnesium Limestone 2 tons/acre
L ₂	=	Limestone Dust 2 tons/acre
P ₁	=	Basic Slag)
P ₂	=	CIRP) At 100 lb/acre P ₂ O ₅
P ₃	=	Double Superphosphate)
2P ₃	=	Twice the original level of P ₃ used
K ₁	=	Muriate of Potash
2K ₁	=	Twice the original level of K ₁ used.
K ₂	=	Sulphate of Potash
2K ₂	=	Twice the original level of K ₂ used.
N ₁	=	Nitrogen (Urea)
2N ₁	=	Twice the original level of N ₁ used.

Area of each plot is 20' x 20' = 400 Sq. ft.

PRODUCTION

Experiment: No PRO/2/1972

- Objectives:** To the Residual Effects of the various applications of fertilizers as in Experiment No. PRO/1/1972.
- Location and Area of Each Plot:** As in the experiment of Serial No. PRO/1/1972. (See plots diagram attached)
- Materials Used** As in PRO/1/1972 - in addition, a top dressing of 1 bag of Urea per acre was applied to all plots.
(NB. 1 bag = 25 kilos = 25 c 2.2 lbs = 55 lbs.)
- Discription:** As in PRO/1/1972 i.e. 9 x 7 plots of 20' x 20' were set up and fertilizer with the required amount of Urea (Urea = 40% N.)
- Observations:** Observation date: 2nd January, 1973. There was no marked residual effect from the previous applications in Experiment No. PRO/1/1972. However, there is a slightly better 'growth' in those plots which receive the full NPK treatments and the proportion of Pangola seems to be constant whereas in the other plots it is being overwhelmed by the local Axonopus and the other grasses.
- Limitations:** The assessment of the result is only visual. The other limitation is due to the lack of rain. Rain only fell during the first few days of the trial.

Experiment No PRO/3/1972:

- Objective :** Observations on systematic introduction of

PRODUCTION

various species of Pasture grasses and legumes into Brunei.

Location of

Trial:

All species were sown in Luahan (Jerudong).

Material Used:

- a) *Glycine javanica*
- b) *Chloris gayana* - Rhodes grass

When Trial Done: Note: The trial was done in August '72 in 'Seed boxes' using sterilized soil.

Observations:

- a) *Glycine javanica*:

It gave a very good germination in the 'Seed-boxes' and grew quite well in the field. However, its habit was not as expected i.e. Leafy perennial spreading by Stolons. In this case it behaved as an annual and did not spread by stolons but grew tall like 'rice'. This could be due to the fact that it was not grazed adequately.

Experiment No. PRO/4/1972

Objective

Observations on systematic Introduction of Pasture grasses and Pasture legumes into Brunei.

**Location of
Trial:**

All species were sown within Luahan (Jerudong).

Material Used:

(NOTE: Materials were obtained from Director of Agriculture, Department of Primary Industries, Brisbane, N.S. Wales, Australia).

PRODUCTION

- i. *Stylosanthes humilis*
- ii. *Axonopus affinis*
- iii. *Brachiaria ruziziensis*
- iv. *Brachiaria decumbens*
- v. *Brachiaria mutica*
- vi. *Chloris gayana* C.V. Common
- vii. *Chloris gayana* C.V. Callide
- viii. *Chloris gayana* C.V. Samford
- ix. *Diohanthium aristatum*
- x. *Paspalum dilatatum*
- xi. *Paspalum plicatulum* C.V. Rodd's Bay
- xii. *PaspalumPlicatulum* C.V. Hartley
- xiii. *Paspalum commersonii*
- xiv. *Pennisotum clondestinum*

These seed samples obtained were only of a very limited quantities and so more care was taken in germinating them in the various seed-boxes.

Observations: First Planting :

i, iii, iv, vi, viii, x, xi, xiv - all these germinated in seed boxes with very varied percentages.

Second Planting:

In the second germination only the same eight samples germinated. After about two to three weeks in the seed boxes the seedlings were transferred into a nursery where they remain for further observation and multiplication.

Entomology

The entomologist arrived in the State in October 1971. Prior to this date, hardly any agricultural entomological investigations had been undertaken within Brunei. The most pressing task was therefore to obtain equipment and laboratory accommodation in order to start as soon as possible.

Prior to the arrival of the entomologist valuable ground-work, particularly in the field of pesticide usage, had been started by the Plant Pathologist. The task before the entomologist was thus considerably lightened, but besides control of insect pests the control of other animals affecting agriculture came within this orbit. These were mainly rats attacking growing rice and wild pigs. As the farming populace was, and continues to be, totally disarmed under security regulations, the poisoning of wild pigs was a significant part of the section's activities during the year.

As no entomological equipment existed within the Department, it was a matter of some urgency to obtain it. In order that a start could be made on the collection and preservation of insects, a few items such as storeboxes, entomological pins and preservatives were obtained from England by airfreight. Insect rearing-cages, setting boards and such items were made by the Building Trades School to specifications supplied by the section and have since given excellent service. The bulk of the equipment ordered from England in January was sent by sea and arrived in August. The end of 1972 thus saw the section well equipped to start its work, although a few items were still outstanding. A local firm dealing in scientific equipment was able to supply enough basic laboratory equipment to allow work to go ahead from the time the laboratory was occupied.

PRODUCTION

Work Undertaken

The most urgent need during the year was to set about establishing a catalogue, supported by a reference collection, of insect pests occurring within the State. Such work, even though carried out with urgency, does require time, and it was not possible to obtain many identifications. Identifications of some important pests had previously been obtained by the Plant Pathologist such as that of the weevil, *Alicidodes* sp. which is a serious and widespread pest of mangos, doing damage by boring in the tips of the branches. The identity of the beanfly, *Melanagromyza phaseoli* had similarly been established, as had that of the fruit fly, *Dacus cucurbitae*. The tip-borer of the egg plant which occurs widely was determined as *Leucinodes orbonalis*. *Hypothenemus hampei*, the coffee berry borer was, not surprisingly, found to occur in Brunei. The mealybug, *Planococcus Citri*, was found on several different host plants among which was cocoa. Until there was sufficient information in this respect, it was not possible to do much in the way of field trials. Experience also had to be gained of insect behaviour in the context of the local agriculture: staff had to become familiar with rearing techniques, procedures for preserving insect specimens, labelling and so on. Besides this, training in insecticide application, dilution to correct concentrations of spray mixtures, advisory approach and other items had to be dealt with. The training of staff therefore occupied and indeed continues to occupy a considerable part of the attention of the entomologist. Some work was done on beanfly, *Melanagromyza phaseoli*, and recommendations for its control were issued. The parasite of this insect; *Opius melanagromyzae* which was liberated by the Plant Pathologist and the entomologist of the Commonwealth Institute of Biological Control Station in Sabah, in August 1971 was not recovered during the period of this report. A trial on the control of the tip-

borer of egg plant, (***Solanum melongena***) which is the larva of the pyralid moth *Leucinodes orbonalis*, was a failure for lack of attack by this insect.

Pig poisoning, as has already been mentioned, occupied much of the time of one assistant. Granulated white or yellow phosphorus was periodically made into a stock mixture and carried by vehicle to site, where growers, forewarned, waited with pieces of tapioca (***cassava***) hollowed out to a depth of about three inches. The team then put two or three dabs of poison into each tapioca piece with a flat stick, the hollow was plugged with material previously removed and the prepared baits were placed where the pigs would find them. Most of the pig poisoning excursions took place towards the end of the year, that is during the rice-growing season. The local wild pig is thought to be ***Sus barbatus barbatus*** Muller. The measures taken as described above are accepted as effective by local farmers but it was not possible to measure this. Owing to the nature of the poison used, poisoning expeditions had to receive wide publicity and in each case medical, police, military and administrative departments had all to be notified in advance. Radio announcements were necessary prior to each expedition. Poisoning could only be carried out in areas of Muslim population. In areas where pigs are kept as free-ranging domestic animals it was obviously not possible to use poison, so no control of pigs, by this means, was possible in such areas. A period of about ten days usually elapsed between receipt of a report of damage by pigs and the placement of baits, in order to carry out the necessary warning procedure. The procedure described above had already been in force for some years and it was thought prudent not to amend it for the time being as there were many other items requiring attention.

PRODUCTION

Rats do damage to growing rice throughout the State. The species concerned were not determined: excellent control was achieved of these animals by using wax-bound baits in the form of one inch cubes containing attractants and an anticoagulant poison. The use of these cubes at a rate of about fifty per acre, laid on bunds surrounding the rice fields, stopped all significant damage by rats. There was some opposition to the method by growers who preferred to see dead rats following the use of zinc phosphide baits, but as the Department was the only source of any free toxicant it was easy to withhold zinc phosphide and issue the anticoagulant, whose effectiveness is not in doubt.

Insect Pests

No single insect species gave cause for alarm during the year. Much routine collecting and rearing of larvae to adults had to be done and will require to be continued and extended if there is to be any knowledge of value in the realm of pest control within the State. In general, the more obvious groups of insects noted were as follows:-

Bagworms (*Psychidae*) on the foliage of many fruit trees, nettle caterpillars (*Limacodidae*) on coconut palm foliage and other hosts, scale insects and mealybugs on many fruit trees and garden plants though these were never noticed causing really serious damage. The long bean, *Vigna Sinensis*, which is widely grown, suffered from attack by the bean fly *Melanagromyza Phaseoli* particularly in the seedling stage where stands were sometimes almost completely killed. It was found that if the plants were protected from attack during their first three weeks of growth they were subsequently capable of withstanding further attack. Sprays of phosphamidon or methomyl applied weekly during

the vulnerable early stages of growth, gave adequate protection. Other insecticides were not tested, but probably there exist others which would be equally effective and tests will continue. It was found possible to count the larvae of **M. Phaseoli** in seedlings by macerating the stems in ten percent potassium hydroxide until soft enough to separate the tissues with a pair of needles under a stereo-microscope, allowing the mouthhooks and integuments of the larvae to be detected within them. Observational trials on Sungai Liang Agricultural Station in the Belait District, on farmers land at Tanah Jambu in the Brunei/Muara District and on stations in Temburong all confirmed the finding that protection against **M. Phaseoli** was necessary and useful during the first three weeks of life of the plants.

Rice appeared to be affected by the complex of insects species normally found in the Southeast Asian region, although it was not possible to obtain identifications of all of them before the end of the year. The Lepidopterous stem borers **Tryporyza incertulas** and **Sesamia inferens** were found to occur. Caseworm, probably **Nymphula depunctalis**, was usually found in rice a week or two after transplanting and was satisfactorily controlled with Carbaryl or BHC sprays. The hemipterous insects **Scotinophara lurida** and **Leptocoris oratoria** were also found. The mole cricket, probably **Gryllotalpa africana** often did damage to rice plants shortly after transplanting if flooding of the ground was not complete. It succumbed to BHC sprays. Armyworms, *Spodoptera* spp. affected rice in Temburong and Brunei/Muara Districts but not extensively. The larvae appeared to feed primarily on grasses growing as weed among the rice plants and only attacked the rice when they had consumed the grasses. Armyworm was susceptible to most insecticides used against it. Sprays of HHC were most widely used

PRODUCTION

but trichlorphon also gave excellent control. In one instance observed, the larvae were heavily infected with disease, probably a polyhedral virus and only two moths were obtained from several hundred larvae collected in the field. The recommendations issued by the Plant Pathologist for the control of insects attacking rice were not altered. Against the lepidopterous stem borers phosphamidon at a rate of 15 ozs of the 50% emulsion concentrate in about 40 gallons of water per acre was recommended for use against borers in the nursery and then at 4, 6 and 8 weeks after transplanting. Carbaryl at a rate of 3 lbs of the 85% wettable powder, again in about 40 gallons of water per acre was recommended as an alternative to phosphamidon and was useful against caseworm where this could not be controlled by draining the water from the field. Phosphamidon at the rate mentioned was also effective against padi, bug *Loratoria* and leafhoppers (*Cicadellidae* and *Delphaudae*). A granular insecticide containing 6% gamma BHC and 6% Carbaryl was found useful for broadcasting in flooded fields against stem borers and *Scotinophara* but as this proved to be an expensive product with a high rate of usage, its use was discontinued. Where pest control in rice was carried out, good control of pest species appeared to be achieved. However, the matter needs closer investigation and will occupy much of the attention of the section in the future.

Bananas

These are widely grown within the State, but yields are far below their potential. At least the species of banana weevil was found to occur widely, and two species may be involved. *Cosmopolites Sordidus* is probably the dominant species and no attempt to control it was observed. These insects in conjunction with Sigatoka disease, at neither of

which control measures were directed, were responsible for depressed yields. A leaflet, for the use of departmental personal, was issued on the control of banana weevils, recommending the examination and treatment of planting material by dipping in dieldrin solution. Included in this leaflet were recommendations for control of these insects in established plantings. Other insects affecting bananas were of very minor importance.

Other Crops

On egg plant, *Solanum melongena* all plantings were damaged by the larvae of the Pyralid moth **Leucinodes orbonalis**. The larvae bored in the growing points of the plants and in the fruit. Citrus did not appear to suffer serious attack from any one insect species. Fruit flies were occasionally encountered in tangerines and the larvae of papilionii butterflies could often be found on large-leaved citrus species but were not of economic importance. The fruit fly **Dacus cucurbitae** attacked a wide range of cucurbits such as water melon, rock melon and loofah. In one instance observed this insect severely affected the young plants of rock melon, *Cucurbita pepo*, killing many. Where measures were taken, phosphamidon sprays if applied in gave good control of fruit flies. Several other species of fruit flies were encountered during the year but have not yet been identified. A green pentatomid bug, probably *Nezara viridula* was found breeding on plantings of long bean, *Vigna sinensis* at Labi in the Belait District. Feeding by this insect caused distortion and scarring of the pods, thus lowering the value of the crop.

PRODUCTION

Use of Insecticides

It is the aim of the Department to use and recommend insecticides which possess low mammalian toxicity, high effectiveness against target species and evanescent residual properties. The question of cost, ease of application and availability are also important considerations. It was not possible to achieve all these aims and optimum insecticide usage remains a dynamic problem. During the year, except for experimental purposes the range of insecticides used was as follows:- Phosvel, Carbaryl, Gamma BHC, Dieldrin, Trichlorfon and Miscible oils.

Anticoagulant poison was used against rats in rice fields and white phosphorus baits against wild pigs. Metaldehyde bait pellets were used against snails, mainly the giant African snail *Achatina fulica*. Methomyl (Lannate) was found to be a useful insecticide on many occasions, but was used with some caution owing to its high mammalian toxicity. DDT in the form of wettable powders was used against armyworm where outbreaks were encountered, but its use as a foliar spray was discouraged, trichlorphon being recommended as a substitute. Commercial firms dealing in insecticides, did so with much caution, probably because of the low turnovers expected and because of ignorance of the subject. It was difficult, therefore, to inform private individuals of reliable sources of insecticides, particularly those requiring small quantities for horticultural use. The Department obtained all its pesticide requirements from overseas. Pesticides were issued to districts who in turn issued them to the farming public. Departmental purchases of pesticides during the year are set out below:-

Product	Amount Purchased	Cost
Anticoagulant Rat bait cubes	152,000	\$ 6,840,00

PRODUCTION

Phosphamidon 50% E.C.	65 gallons	\$ 4,377.50
Phosvel 30% E.C.	18 gallons	\$ 1,075.68
Carbaryl 85% W.P.	3 cwts	\$ 1,344.00
BHC 26% D.P.	3 cwts	\$ 600.00
Snail bait	200 lbs	\$ 190.00
Lannate (Methomyl) S.P.	20 lbs	\$ 560.00
Trichlorphon S.P. (Dipterex)	40 lbs	\$ 216.00
Total =		<u>\$15,203.18</u>

The bulk of these purchases utilised during the year and only insignificant quantities remained unused.

Wild pig Poisoning activities can be summarised as follows:-

Districts:-	Brunel/ Muara	Temburong	Tutong	Totals
Number of Excursions made.	64	7	10	81
Number of baits laid	8624	1552	2426	12,602

Application of Insecticides

Where spraying was done on departmental stations, knapsack sprayers were mainly used: these were either pressure-operated or were of the usual type incorporating a pump. Motorised knapsack sprayers were also used as ground could be covered more rapidly and advantage could be taken of the low-volume characteristics of such machines.

Training

As soon as the section possessed adequate insect demonstration material and experience of local problems, courses for subordinate district staff were started. The courses lasted for three weeks and four men attended each course, the first of which began on November 20th. The purpose under-lying the courses was to give instruction on the orders of insects most frequently causing damage, the properties and usage of insecticides, methods of applying them safely and correctly, the reporting of insect damage and also of insecticides failing to give good control. Visits to stations and growers were made and then discussed with course members. In this way it was hoped that after training, some foundation of factual knowledge on pest control would have been laid and at the same time the section would be more aware of those problems besetting field personnel.

Visits

Mr. W.S. Sands, who is in charge of the Termite Research Unit of the centre for Overseas Pest Control, visited the State in the course of his tour of Malaysia. He was able to give valuable advice on termite control in buildings to the Public Works Department and to have discussions with the Conservator of Forests on termite problems. In addition, his visit established a liaison which will be useful to the Department when termites present any problems. His visit occurred from September 24th to 26th.

The laboratory was visited by several parties from schools in Brunei and by local horticultural societies who took a gratifying interest in a discipline somewhat new to the State.

PRODUCTION

(b) The Forests

Ecological Classification:

The forests of Brunei covering 1,678 square miles, or 75% of the total area of the State may be ecologically classified under the following five types:-

1. **Mangrove Forests** (43.4 square miles), found at sea level and characteristically inundated at high tides by brackish water.
2. **Health Forests** (18.8 square miles), found on sandy alluvial soils usually below 100 feet above sea level but occasionally also on high altitude sand-stone ridges in Ulu Temburong.
3. **Peat Swamp Forests** (417.4 square miles), found adjacent to the main rivers but separated by forests of types (1) or (2) from the sea. These forests emerge irregularly into
4. **Mixed Dipterocarp Forests** (1,179.1 square miles), lying immediately above the peat swamp forests and extending up to about 4,200 feet above sea level where they give place to
5. **Montane Forests** (20.00 square miles), which are found only in Ulu Temburong adjacent to the State Border up to 6,000 feet above sea level.

Protection Forest .

Approximately 130 square miles of Mixed Dipterocarp and Montane Forest comprising the basins of the Sungai

PRODUCTION

Temburong and Sungai Belalong in Batu Apoi Forest Reserve is considered not to be exploitable due to the steepness of the hillside and difficulty of access through the lower valleys of these rivers, and must consequently be classified as suitable for Protection Forest only.

Forest Reservation

There were no changes in the areas gazetted as Forest Reserves. See Appendix "A".

Demarcation and Maintenance of Boundaries

1. State Boundaries

For purposes of forest exploitation the State Boundary following the watershed between Ulu Selapon and Sagan 'A' Bukit was defined by a rentis.

2. Forest Reserve External Boundaries

The boundary of Andulau Forest Reserve between Bukit Pagon and Sungai Kagu was cleared and Forest Reserve Notice Plates renewed as required and also a further section near Sungai Penyuroh. The total length cleared was 1,213 chains.

Forest Policy

During the year there was no change in the stated forest policy which is designed to conserve the forest produce of the State for fostering home industries and to provide cheap timber for internal consumption by severely restricting exports.

PRODUCTION

See Appendix "B"

Arrangements for payment of compensation in connection with losses of timber sustained by the encroachment into Brunei of a timber licensee from Sarawak were finalized.

Royalty Assessment.

There were no changes in Royalty rates or method of assessment during 1972.

Silviculture

With the relatively intensive working of Dipterocarp Hill Forest it has been decided to modify the normal treatment of GCL (girdling and climber cutting) by confining this treatment only to localities where regeneration of acceptable species is already established and is being retarded by excessive shade. Areas generally lacking in such regeneration are either left untreated or re-afforested by enrichment planting. The basic reason for this revision is primarily geological as it appears that soil degradation due to excessive oxidation, insolation and wash-out may follow a severe opening of the canopy on Bekenu type soils, especially on slopes over 20°. Silvicultural treatment was not carried out in swamp forests due to the absence of natural regeneration of acceptable species.

(a) Natural Regeneration

Poison girdling of relics and under-storey trees down to 6" diameter as prescribed under the Malayan Uniform System of Silviculture was continued throughout the year.

PRODUCTION

1. Silvicultural operations consisted of poison girdling 106.5 acres in Compartment 57 Andulau Forest Reserve and 175 acres in Compartments 1 and 2 Ladan Hills Forest Reserve using 1,260 lbs and 2,099 lbs of Sodium arsenite respectively. The cost of these operations was \$30.10 per acre.

2. The subsequent silvicultural operation of girdling unacceptable species was carried out in Compartment 5 Andulau Forest Reserve in which 162 acres were treated at a cost of \$25.80 per acre.

(b) Enrichment planting

An area of 57 acres practically devoid of any Dipterocarp regeneration in Compartment 57 Andulau Forest Reserve was selected after final felling and planted with 7,328 Kapur Bukit (*D. beccarii*) seedlings, spacing 33' x 10'. By the end of the year this plantation was successfully established at a cost of \$142.00 per acre.

Another enrichment plantation of Kapur paya (*D. rappa*) over 21 acres of State Land Swamp Forest at Badas and a further 2.00 acres at Bangtajok Ulu Belait was carried out using 4,500 seedlings at a spacing of 20' x 10. In both these cases the area planted was clear felled Alan Bunga (*S. albida*) Swamp Forest where no natural regeneration of acceptable species was present. A small plantation of Semayor (*S. inaequilateralis*) was also tried but proved unsuccessful. The costs of these plantations in Swamp Forest was \$160.00 per acre.

It is appreciated that in both Hill and Swamp Forests the cost of these initial plantations was excessive and ways of substantially reducing it are under investigation.

PRODUCTION

(c) **Anti-Erosion Plantations**

Anti-erosion plantations of Wattle (*Accacia auriculaeformis*) were extended and maintained as required at both Berakas Camp and along the Labi Road. The raising of seedlings for these plantations is interspaced with seeding of Kapur bukit and other Dipterocarps, thus providing full time utilization of nursery facilities.

(d) **Species Trials**

Although all trials of exotic species were discontinued as from 1970, sample plot measurements and the maintenance of existing plantations were carried out as prescribed.

(e) **Seeding of Dipterocarps**

There was only light seeding of Dipterocarps during 1972. However Swamp Kapur seeded for the first time in five years, thus providing planting material for enrichment plantations in Swamp Forest.

Production

Production of logs fell by 10% as compared with 1971. This is the third year in succession in which log production has shown a decrease. As timber production is virtually entirely for home use, domestic consumption follows very closely the trend of Development Expenditure of the State with some modification consequent on B.S.P. demands.

Total production figures of all classes of Forest Produce are given in Appendix E.

PRODUCTION

(a). Logs

The volume of logs extracted to sawmills was 45,429 (51,458) tons. There was no shortage of logs at the mills and by the end of the year sawmill stocks remained practically unchanged.

(b) Minor Forest Produce

1,578 (1,505) piculs of Jelutong latex were tapped and exported. The F.O.B. value was \$136,695 (\$134,864).

Sawmills

A total of 22 (27) sawmills operated during the year. The sawn outturn was 23,467 (26,574) tons representing a recovery of 54%. Of the five sawmills which ceased operation, three closed through lack of orders, one closed for removal to another site and one closed for reasons of State Security.

Full details of the mills, their equipment and labour force is given in Appendix 'G'.

Two Celcure plants were in operation throughout the year.

Imports:

The imports of sawn timber from Sarawak fell in value from \$21,969 to \$17,207. Only 23 tons of sawn timber were imported in direct competition with local timber from Brunei forests. 27 tons of sawn Belian was imported. Imports of Teak from Thailand for high quality furniture and flooring continued.

PRODUCTION

Exports:

796 (994) tons of sawn timber was exported valued at \$165,681 (\$211,703). Of this quantity 775 tons was Ramin (*Gonystylus bancanus*), the only timber of which unrestricted export is permitted as having only a limited market within the State.

See Appendix "K".

Finance

Total forest revenue from all sources was \$372,890 (\$399,650) and expenditure was \$521,556 (\$485,292).

See Appendices "L" & "M".

Herbarium

With the co-operation and advice from the Director of Forestry (Research) Sarawak, the Silviculturist was able to undertake the complete re-organization and indexing of the Herbarium and Wood Library. Leaf and wood specimens from Sabah and Sarawak were collated by species and families with corresponding collections from Brunei. At the same time the opportunity was taken of providing new mountings for leaf specimens and new storage cupboards for wood-specimens.

Education

The normal contingent of two Brunei Forest Guards did not attend the Annual General Training Course at the Forest Research Institute at Kepong due to difficulties arising from protocol arrangements.

PRODUCTION

Awang Hafneh bin Md. Salleh started a post-graduate course at the commonwealth Forest Institute, Oxford in October.

Visitors

Dr. J.A.R. Gibson Forest Entomologist of the Commonwealth Mycological Institute and Dr. W.A. Sands from the Centre for Overseas Pest Research, London, paid short visits to Brunel.

Administration

For the purposes of forest administration the State is divided into two districts Brunel and Kuala Belait,

The Staff as at 31st December 1972 was as follows:-

APPOINTMENT	Approved Establishment		Staff	
	1971	1972	1971	1972
Conservator of Forests	1	1	1	1
District Forest Officer	2	2	2	2
Silviculturist	1	1	1	1
Plantation Officer	1	1	1	1
Sub-Assistant Conservator	1	1	Vacant	Vacant
Forest Ranger Grade I	3	3	3	3
Forest Ranger Grade II	4	4	4	4
Foresters	10	10	10	10
Forest Guards	27	27	27	27
Forest Labourers	19	19	19	19
Chief Clerk	1	1	1	1

PRODUCTION

Clerk Grade "B"	3	3	3	3
Clerk Grade "A"	3	3	3	3
Draughtsman	1	1	1	1
Translator	1	1	1	1
Driver/Mechanic	1	1	1	1
Vehicle Driver	2	2	1	2
Outboard Dirver	2	2	2	2
Peon	2	2	2	2
TOTAL	85	85	84	84
=====				

Buildings

The construction of four Departmental semi-detached Class 'G' quarters was completed at Sungai Liang for housing of field staff stationed there.

PRODUCTION

Appendix 'A'

Areas in acres of constituted forest reserves on 31st December, 1972

DISTRICT	Constituted Reserve	Area in acres on 1.1.1972.	Area in acres on 31.12.72.	Number of Notification.
Belait	Labi Hills	263,000	263,000	38/1950
Belait	Anduki	2,264	2,264	114/1948
Belait	Badas	65	65	135/1948
Belait	Arboretum	56	56	71/1948
Belait/Brunei	Andulau	30,690	30,690	64/1940
Brunei	Ladan Hills	84,000	84,000	79/1951
Brunei	Berakas	860	860	161/1957
Brunei	Batu Apoi	111,500	111,500	247/1957
Brunei	Selirong	6,175	6,175	29/1948
Brunei	Labu	22,200	22,200	50/1954
Brunei	Peradayan	2,650	2,650	192/1953
TOTAL		523,460	523,460	-

APPENDIX 'B'
FOREST OFFENCES

District	Section/Rule	Cases	Compounding Fees	Compensation and Fines	Total
Brunel	17.1 (a)	5	\$ -	\$ 25.00	\$ 25.00
Brunel	4.1 (a)	2	670.00	-	670.00
Brunel	3	1	40.00	-	40.00
Brunel	11. (1)	1	30.00	-	30.00
Brunel	16	1	50.00	-	50.00
Belalt	4.1 (a)	1	80.00	-	80.00
Belalt	7	1	25.00	-	25.00
Belalt	5. (2)	1	-	589.00	589.00
TOTAL	-	13	\$895.00	\$614.00	\$1,509.00

APPENDIX 'C'
ACREAGE UNDER PERMITS

Forest Reserve	As on 1.1. 72	Cancelled 1972	Issued 1972	As on 31. 12 1972
TIMBER				
Peradayan F.R.	1,777	1,777	-	-
Ladan Hills F.R.	368	368	154	154
Labu F.R.	206	-	-	206
Labi Hill F.R.	1,534	-	-	1,534
Andulau F.R.	2,220	-	-	2,220
TOTAL	6,105	2,145	154	4,114
FIREWOOD, POLES, ETC.				
LABU FOREST RESERVE	1,502	-	-	1,502
SELIRONG F. RESERVE	1,183	-	-	1,183
	2,685	-	-	2,685

PRODUCTION

APPENDIX 'D'

ACREAGE UNDER LICENCE

DISTRICT	As on 1. 1. 72	Cancelled 1972	Issued 1972	As on 31. 12 1972
TIMBER				
Brunel	43,193	640	7,414	49,967
Belalt	39,692	6,157	150	33,685
TOTAL	82,885	6,797	7,564	83,652
FIREWOOD, POLES, ETC.				
Brunel	2,058	969	-	1,089
TOTAL	2,058	969	-	1,089

PRODUCTION

APPENDIX 'E'

(a) Outturn in cubic feet of Timber and Fuel during 1972

Forests	Heavy Hardwood Round	Other Timber Round	Total Timber Round	Poles (Nos) Mangrove	Other	Firewood* Mangrove	Other	Charcoal (Piculs)
FOREST RESERVE	116,342	750,489	866,831	45,031	-	18,641	-	9,311
OTHER FOREST	95,388	1,335,985	1,431,373	3,985	5,579	1,975	3,564	-
TOTAL	211,730	2,086,474	2,298,204	49,016	5,579	20,616	3,564	9,311

* Cubic feet stacked

(b) Outturn on Minor Produce during 1972

Forests	Getah Jelutong (Piculs)	Nilbong Nos	Rottans (Piculs)	Tree Sales Nos
FOREST RESERVE:	813	100	56	580
OTHER FOREST	765	-	235	-
TOTAL	1,578	100	291	580

(1 Picul = 133 lbs.)

PRODUCTION

APPENDIX 'F'

LOG Production at Sawmill (In tons of 50 cu ft. Hoppus)

	Heavy Hardwoods			Medium Hardwoods				Light Hardwoods				Others	TOTAL
	All Species	Kapur Bukit	Kapur Paya	Keruling	Red Meranti	Other Meranti	Alan Ramin	Medang Tabac					
FOREST RESERVE													
Belait District	2,060	1,685	297	2,006	1,963	3,241	1,342	65	154		2,014	14,827	
Brunei District	233	222	-	224	813	151	-	-	18		498	2,159	
TOTAL FOREST RESERVE	2,293	1,907	297	2,230	2,776	3,392	1,342	65	172		2,512	16,986	
STATE LAND FOREST													
Belait District	1,571	1,905	205	2,883	1,909	3,660	6,665	3,516	456		2,791	25,561	
Brunei District	302	206	1	506	1,137	590	-	-	-		140	2,882	
TOTAL STATE LAND	1,873	2,111	206	3,389	3,046	4,250	6,665	3,516	456		2,931	28,443	
TOTAL LOG PRODUCTION	4,166	4,018	503	5,619	5,822	7,642	8,007	3,581	628		5,443	45,429	

PRODUCTION

SARAWAK

APPENDIX "G" SUMMARY OF SAWMILLS

Sawmills	Breakdown Rack	Band	Resaws Circular	Power and H. P. Band Electric	Labour Band Expatriate	Local	Total	Logs Sawed Tons 50 cu. ft.	Sawn Outturn Tons 50 cu. ft.	RECOVERY
BRUNEI DISTRICT:										
1. Brunei Timber Company	1	2	-	-	80	3	11	1,638	784	48%
2. Haji Abang	1	1	-	-	40	12	32	2,190	1,240	57%
3. Haji Ibrahim (Nagalong)	1	-	2	-	150	12	9	1,115	547	49%
4. Lau Ming Guan	1	-	2	-	180	-	-	598	298	50%
5. Pengiran Othman	1	-	2	-	136	13	4	209	83	40%
BELAIT DISTRICT:										
6. Chan Siew Kee	1	-	1	-	45	2	12	737	368	50%
7. Hap Hong (Bukit Puan)	-	1	1	-	120	25	21	1,334	639	48%
8. Hap Hong (Seria)	1	-	3	-	140	-	-	2,826	1,114	40%
9. Pasir Puteh Sawmill	-	2	-	-	92	21	16	3,269	2,199	67%
10. Liew Khim (Bangtajak)	-	1	1	-	94	-	-	1,670	858	51%
11. Liew Khim (Lian Shin Sawmill, K. B.)	1	2	1	-	120	36	18	3,095	2,124	69%
12. Lim Kah Kee	-	-	2	-	80	5	13	590	304	52%
13. Latong Sawmill Company (Arip Mujun)	-	-	2	-	90	23	-	2,734	1,112	41%
14. M. Idris	-	-	1	1	40	19	6	3,292	2,024	61%
15. Pengiran Haji Wahab	1	-	3	-	120	-	-	148	68	46%
16. Mabru Sawmill	-	2	-	-	80	22	3	5,993	3,637	61%
17. Shing Yip Sawmill	1	1	1	-	3	-	-	713	51	7%
18. Chong Hin Sawmill	1	-	2	-	128	30	16	4,678	2,684	57%
19. Yick Hin Sawmill (Labok Mengkair)	-	-	2	-	88	58	5	592	305	52%
20. Yick Hin Sawmill (Kuala Belait)	1	-	3	-	155	-	-	4,883	2,007	41%
21. Kilang Papan Pepakan	-	2	-	-	88	27	3	1,449	927	64%
22. Yong Lee Lee	-	2	-	-	40	6	10	1,219	758	62%
TOTAL	12	16	28	2	-	314	164	44,972	24,131	54%

PRODUCTION

APPENDIX 'H'

TIMBER PRODUCTION AND MOVEMENT (in tons of 10 cubic feet)

	Heavy Hardwoods			Medium Hardwoods			Light Hardwoods				TOTAL
	All Species	Kapur Bukit	Kapur Paya	Keruing	Red Meranti	Other Meranti	Alan	Ramin	Medang Tabac	Others	
SAWMILL PRODUCTION											
Belait District	1,996	2,107	213	2,905	2,446	3,670	3,980	1,423	89	2,350	21,179
Brunei District	234	199	20	426	838	737	19	14	68	397	2,952
Total Sawn Production	2,230	2,306	233	3,331	3,284	4,407	3,999	1,437	157	2,747	24,131
Sawn Imports	31*	-	-	-	-	5	14	-	-	-	50
Sawn Exports	3	-	-	-	-	11	-	793	-	-	807
Sawmill Stocks on 31.12.72	509	216	46	357	177	350	569	423	9	309	2,965
Sawmill Stocks on 1.1.72	405	228	6	301	250	272	480	369	30	717	3,058
Local Use (Sawn)	2,154	2,318	193	3,275	3,357	4,323	3,924	590	178	3,155	23,467

* Includes 27 tons of Bellan Sawn Timber.

PRODUCTION

APPENDIX 'I' LOCAL TIMBER PRICES

	Heavy Hardwoods	Medium Hardwoods				Light Hardwoods		
		Selangor Batu Resak (1)	Kapur Bukit (2)	Kapur Paya (3)	Keruing (3)	Meranti (4)	Alan (5)	Mixed Light Hardwoods (5)
1. Berotis under 2" x 3"	.....	B\$300/-	B\$300/-	B\$180/-	B\$180/-	B\$180/-	B\$160/-	B\$160/-
2. Scantlings 2" x 3" up to 4" x 4"	300	200	180	180	160	180	160	180
3. Scantlings 2"x5" over to 54 square inches cross-section inclusive, but under 9" width.	300	250	180	180	180	180	160	160
4. Boards ½" up to 1½" thick and 4" to 8" wide inclusive	350	250	200	200	200	200	180	170
5. Boards under ¾" thick and 4" to 8" wide inclusive	350	200	200	200	200	200	180	170
6. Boards and Planks 1" up to 6" thick and 9" to 12" wide inclusive	300	200	180	180	160	180	160	160
7. Boards under 1" thick and 9" to 12" wide inclusive	300	200	180	180	160	180	160	170
8. Logs for sawing	130	80	70	60	60	70	60	60

USES:

1. Heavy structural work, bridges and wharfing timber (specially for fenders and incontact with sea): house posts.
2. A good building timber especially for window and door frames and flooring.
3. A strong building timber especially for posts, beams and roofing, but cannot be painted as oil may subsequently exude from the surface. A very hard wearing timber suitable for temporary revetting but not permanently durable in contact with ground unless treated. Absorbs preservatives easily.
4. Light constructional timber for housing, door, panelling and cladding. Used also for furniture and fixtures.
5. All temporary light constructional work and especially for shattering and casing.

APPENDIX 'J'

Summary of Imports of sawn timber by Species and country of origin, 1972
(in tone 50 cu.ft)

SPECIES																					SARAWAK
Alan	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	14
Meranti	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5
Bellian	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	27
Selangan Batu	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4
TOTAL	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	50

Declared value = \$17,207

PRODUCTION

APPENDIX 'K'

**Summary of Exports of Sawn Timber by Species
and countries of destinations, 1972
(in tons of 50 cubic feet)**

SPECIES	Sarawak	United Kingdom	W. Germany	Holland	TOTAL
Ramin	96	222	422	35	775
Meranti	11	-	-	-	11
Keruing	7	-	-	-	7
Selangan Batu	3	-	-	-	3
TOTAL	117	222	422	35	796

Declared Value = \$165,681

Charcoal:

1,860 piculs of Charcoal were exported to Sarawak.
Declared value = \$16,740

Jelutong:

1,578 piculs of Jelutong were exported to Singapore.
Declared value = \$136,695.

(1 picul = 133 lbs.)

APPENDIX 'L'

Statement of revenue in dollars by district, 1972

DISTRICT	Timber and Poles	Firewood and Charcoal	Minor Forest Jelutong	Produce Others	Compensation and Fines	Licence Fees and Premiums	TOTAL
Brunel	48,260	3,515	7,289	341	815	6,395	66,615
Belait	285,916	39	4,659	119	694	14,848	306,275
TOTAL	334,176	3,554	11,948	460	1,509	21,243	372,890
=====							

PRODUCTION

APPENDIX 'M'

Summary Statement in dollars of revenue and expenditure 1972

REVENUE		EXPENDITURE	
		(a). Recurrent:	
1. Timber and Poles	\$334,176 (\$376,026)	Personal Emoluments	\$392,603 (\$362,748)
2. Minor Forest Produce	15,962 (13,876)	Administration & Transport	57,250 (54,052)
3. Licence Fees, Premiums and Compensations	22,752 (9,749)	Organization & Research	5,719 (10,301)
		Special Expenditure	9,110 (6,770)
	\$372,890 (\$399,650)		\$464,682 (\$433,871)
		(b). Development:	
		Silviculture	56,874* (\$ 28,666)
	\$148,666 (\$ 85,642)	Species Trials	- (24,755)
	\$521,556 (\$485,292)		\$521,556 (\$485,292)
Balance being excess of Total Expenditure over Revenue			

* Recurrent expenditure as from 1972

(C) LAND UTILISATION AND TENURE

All land which has not been alienated is deemed to be State land. The present Land Code, which came into force in September 1909, provided for the registration of titles to land issued prior to its enactment and for the grant of titles thereafter by the Resident whose powers were transferred to the Sultan in Council when the 1959 constitution was enacted. All such titles are registered in the four District Land Offices in accordance with the principles of the Torrens system. They are subject to general conditions such as the fact that they convey a surface right only and that the Government reserves the right to all minerals, to remove earth, clay, gravel, etc. required for public purposes and to make roads and to lay pipe and telephone lines across the land. Special conditions, specifying how the land shall be used can be and usually are endorsed on titles. If no special conditions are laid down the Code requires the land to be used solely for agricultural purposes. Approval of applications to change the special conditions has virtually come to a halt, only two in Brunei District being approved during the year and none in the other Districts. A very large number of applications have accumulated awaiting decisions from the Council of Ministers, which has deferred considering them until development plans have been approved. Only taken rents are charged, except in some commercial areas, and a small premium is charged if the land has road frontage and when there are unexhausted improvements on it.

2. Alienation of State land virtually ceased in 1954 when it was found that a considerable backlog of applications, covering the period 1936-1954, had accumulated, which with the available staff would take many years to clear. A number of applications were cleared before it was decided

PRODUCTION

in 1968 not to proceed any further until development plans have been approved for the State, the remainder, totalling about 1,600, having been submitted to the Council late in 1967 and early in 1968.

3. It is estimated that less than 2% of the area of the State has been alienated under the Land Code and some 7,500 acres (0.005% of the State Land) is occupied temporarily by the Brunei Shell Petroleum Company in Belait under their Petroleum Mining agreement with the Government.

4. An appreciable amount for farming of short-term crops, particularly rice, is done by holders of Temporary Occupation Licences. 1,288 licences were granted for a total of 2,647 acres; the comparative figures for 1971 are 1,536 and 2,592 respectively. Temporary Occupation Licences are also granted for the removal of stone, gravel, sand, etc. Income from fees, not including royalties for taking stone, etc. was \$12,589 as compared with \$10,885 during the previous year.

5. All mortgaging of land to non-citizens, leasing and transfers of land to non-citizens and changes of the tenure conditions imposed when land grants are made require the prior approval of His Highness the Sultan and Yang Di-Pertuan in Council. All mortgages registered so far have been to Banks, so require approval. There were 159 during the year.

6. Acquisition of land for public purposes, mostly for development projects, continued to take up much of the time of the Lands Staff. Some 32 pieces of private land were acquired during the year at a cost of \$730,014. Acquisition by agreement is very rarely possible and the procedure pres-

PRODUCTION

cribed by the Land Acquisition Enactment, Cap. 41, is, of necessity, time and labour consuming.

7. As regards staff, there was an increase of two bringing the approved establishment up to 76, but the Department was in difficulties owing to vacancies as may be seen from the figures below:

Designation	No. of Approved Posts	Vacancies at Beginning of the year	Vacancies at End of the Year
Land Officers	2	-	2
Assistant Land Officers	3	-	1
Land Bailiffs	16	3	-
Valuation Assistant	1	1	1
Tracer	4	1	-
Clerk Grade A	16	1	1

8. The shortage of Land and Assistant Land Officers in particular limited the output of work. The Temburong Land Officer and Registry had to be left without an Officer in charge from 9th October until the end of the year.

PRODUCTION

(D) FISHERIES

Marine Fisheries

Brunel's marine fisheries have developed in a relatively short period from purely traditional fishing to an increasingly more productive fisheries using fast speed boats and more modern fishing gear. The catch has steadily increased and is now in the region of 2000 short tons per annum. It is unlikely that there will be any further significant increase unless Brunel's fisheries is re-organized and more seaworthy boats using advanced fishing techniques are introduced. A fishing survey carried out by the Fisheries Department several years ago revealed the existence of reasonably rich fish stocks over Brunel's continental shelf area. The Department has worked out detailed plans for the development of these resources fully incorporating the present fishing community and for the re-structuring of the prevailing unsatisfactory marketing system. Should these plans be put into practice a very considerable increase in Brunel's fish production can be expected.

A prerequisite for an orderly fisheries development is its strict control through all its stages and this is possible only with the aid of an effective fisheries legislation. This was lacking so far, but was drawn up some years ago and has been passed by the Legislative Council at the end of December.

This year was a very good one for fishing and Brunel's markets were generally well supplied with fish and prawns. The total available in the main markets increased from 1,841 short tons last year to 3,231 s.t. this year, the increase in prawns beings 450 s.t. and in fish 940 s.t. The estimate total production by Brunel's fishermen alone increased by 569 s.t. to 2,200 s.t. Details of catches, origins of fish etc. are given in tables I to IV.

The market value of all fish and prawns sold in the three main markets of the country increased by \$2,519,958 to a total of \$5,902,989 (see table III). A price comparison with last year shows that the consumer price for fish and prawns has remained remarkably stable:

PRODUCTION

Average price per kati of

	fish grade I	fish grade II	fish grade III	fish grade IV	Prawns
1971	\$ 1.84	\$ 1.18	\$ 0.88	\$ 0.46	\$ 1.59
1972	\$ 1.76	\$ 1.19	\$ 0.86	\$ 0.46	\$ 1.58

FRESHWATER FISHERIES

The common belief in Brunei that freshwater fish would not find a ready market here has been disproved several times this year not only when the Department harvested its ponds and could have sold many times more fish than were available, but also when imported freshwater fish appeared in the Bander Seri Begawan market and sold for \$ 3.00 per kati. This is considerably more than the average of \$ 1.76 per kati of first grade sea fish. In consequence the profitability of fish culture is being increasingly realized and several businessmen have shown interest in establishing their own ponds. The Department also plans to build a demonstration pond in the Labi area and reservation of land has been applied for.

In the meantime practical demonstrations were given at the Sungai Jambu Fish Farm concerning the planning, construction and general management of fish ponds. Experimental work continued with regard to obtaining the highest possible yield by varying combinations of species, by different stocking rates, by variations in fertilizing the ponds and feeding the fish etc.

The usual mixed stocking with *Tilapia* hybrids (*Tilapia hornorum* x *T. mossambica*), *Lampan Jawa* (*Puntius gonion* -

PRODUCTION

otus) and Grass carp (*Ctenopharyngodon idellus*) with a minimum of feeding brought good results, but there were indications that the cultivation of *Tilapia* hybrids alone would produce comparable or even better yields. Verification of these preliminary results will be of special importance as there are no facilities here for the hormone-induced breeding of the Chinese carps, the fry of which has to be imported from Hong Kong. *Tilapia*, on the other hand, are being bred at the Fish Farm. Experiments with various stocking rates of *Tilapia* alone were undertaken. These are not yet concluded, but the results suggest that our highest stocking rate so far (1500 *Tilapia* per acre) could still be increased.

The local demand for fish fry can now be met from The Department's own production. Out of this 1,580 *Tilapia* hybrids and 820 *Lampan Jawa* were distributed to local ponds, whilst 6,000 *Tilapia* and 500 *Lampam Jawa* were used for our own experimental work.

The early development of the Giant Freshwater Prawn, *Udang Gala* (*Macrobrachium rosenbergi*) was studied in the Department's Experimental Section with the aim to rear from the egg large numbers of prawns for later stocking and rearing in fish ponds. The investigation is still in progress.

One of the larger ponds of the fish farm was made available as a recreational facility to the public in late 1971. For an entrance fee of \$2 people can try their hand at catching any of the three main species of fish with which the pond has been stocked and is restocked whenever necessary. During the year 548 permits were sold and 6,897 *Tilapia*, 244 *Lampam Jawa* and 85 Grass Carp were caught by sports fishermen. The largest fish caught was a Grass Carp weighing lbs.

PRODUCTION

The culture of aquarium fish continued at the Fish Farm and there was also some incidental breeding at the Aquarium. From these two sources a total of 1,333 aquarium fishes were sold during the year.

Hassanal Bolkiah Aquarium:

The Hassanal Bolkiah Aquarium was opened to the public on 1st March and proved to be extremely popular from the start. During the first two months 59,328 visitor were counted which is quite remarkable considering Bandar Seri Begawan's population of approximately 37,000. The number of visitors did, of course, decrease later on, but there still was a steady flow of people visiting the Aquarium and the total number for the year was 104,402.

Adults pay an entrance fee of 30 cents, children 20 cents, while school children visit the Aquarium free of charge when accompanied by their teachers. 64% of the visitors were adults, 27% paying children and 9% school children.

The Aquarium has 28 marine tanks with a total capacity of 40,000 gall. and 19 freshwater tanks holding 18,000gall. In addition there is a Quarantine and Experimental Section with another 75 tanks and there are water storage facilities for 45,000gall. of sea water and 30,000 gall. of fresh water.

The great majority of marine specimens exhibited in the Aquarium are collected by the Fisheries Department's staff, while many of the freshwater fishes are imported. On 31st December the stock in the Aquarium and in the Quarantine & Experimental Section was as follows:

PRODUCTION

	Marine Section		Freshwater Section	
	Species	Specimens	Species	Specimens
Celenterates	9	35	-	-
(Corals, sea anemones)				
Crustaceans	3	5	1	3
Fishes	95	280	52	1,114
Reptiles	1	4	-	-
Total	108	324	53	1,117

A full-colour aquarium guide and colour post cards with ten different fish motives were on sale at the Aquarium's reception. In the Aquarium's 90 seat lecture hall films on various subjects of natural history were shown in three-weekly intervals and these shows have become very popular and were invariably booked to the last seat.

Administration:

The permanent staff of the Department increased from 49 to 54. The increase was in connection with the Aquarium.

PRODUCTION

TABLE I

**Fish and Prawns available in the markets of the State in 1972
(Weights in lbs)**

Months	Bandar Seri Begawan (including Muara)	Seria	Kuala Belait
January	240,116	16,939	12,720
February	439,787	59,488	37,158
March	438,972	98,967	44,592
April	608,846	71,295	39,691
May	602,057	86,786	62,240
June	478,078	49,722	43,101
July	401,778	23,560	47,857
August	546,921	94,246	19,510
September	468,857	69,545	30,844
October	392,609	72,745	53,286
November	368,214	40,327	26,572
December	309,849	42,647	22,246
Total	5,296,084	726,267	439,817

Total for the States: 6,462,168 lbs 3,231 s.t.

PRODUCTION

TABLE II

Origin of Fish and Prawns available in the markets of the State in 1972.

(Weights in lbs)

Months	Brunei	Sarawak	Sabah	Singapore
January	124,671	44,155	99,728	1,221
February	229,809	107,587	196,363	2,674
March	351,004	126,700	103,801	1,026
April	334,315	138,527	246,990	-
May	333,061	163,723	249,453	4,846
June	262,527	151,430	156,944	-
July	205,505	144,848	152,842	-
August	302,173	192,583	165,921	-
September	247,865	159,961	161,420	-
October	295,676	134,572	81,318	4,074
November	277,080	76,524	79,543	1,966
December	246,665	86,366	39,193	2,518
Total	3,210,351	1,496,976	1,736,516	18,325

PRODUCTION

TABLE III

MARKET VALUE OF FISH PRAWNS SOLD IN THE MARKETS OF THE STATE IN 1972

MONTHS	B.S. BEGAWAN	MUARA	SERIA	KUALA BELAIT
JANUARY	\$240,635.69	\$2,488.93	\$18,395.85	\$15,075.65
FEBRUARY	413,207.20	4,463.71	63,595.90	33,434.64
MARCH	391,418.55	2,029.98	93,374.27	36,822.02
APRIL	538,239.19	3,642.40	61,685.86	31,437.42
MAY	536,614.51	4,124.66	80,120.03	51,408.93
JUNE	393,141.75	4,212.29	49,736.53	41,577.54
JULY	343,843.37	4,582.23	51,698.26	23,573.92
AUGUST	476,687.13	3,681.11	103,606.01	21,078.44
SEPTEMBER	378,977.58	2,854.77	77,775.25	30,847.63
OCTOBER	351,431.72	5,754.90	73,689.99	46,860.05
NOVEMBER	343,939.24	4,967.79	41,212.32	28,524.88
DECEMBER	299,936.22	4,960.76	48,266.81	23,355.66
TOTAL	\$4,708,072.15	\$47,763.53	\$763,157.08	\$383,996.79
TOTAL FOR BRUNEI : B\$5,902,989.55				

PRODUCTION

TOTAL IV

Estimated Total of Fish Production in Brunei in 1972
(Weights in lbs)

	Fish	Prawns
All recorded markets	2,196,183	1,014,168
Tutong	43,924	-
Temburong	21,961	10,141
Subsistence Consumption	873,810	57,456
Freshwater Fisheries	182,610	-
	3,318,487	1,081,765
Brunei's estimated total production : 4,400,252 lbs 2,200 s.t. (= 1,997,714 kg. 1,997 metric tons)		

The uninhabited, remote parts of the upper reaches of the Temburong and Belalong rivers have been traversed geologically only once before by D.E. Morgan, a Shell Company geologist, in 1931. Morgan found highly deformed, metamorphic rocks unlikely to contain oil and he concluded there was little to interest the petroleum geologist. Other casual prospectors have panned the river gravels but have found no visible evidence of significant mineralisation. No further geological exploration has been done since Morgan's survey which was conducted rapidly on only a preliminary reconnaissance level.

In recent years, many apparently unattractive, barren areas have been re-examined in the light of new methods which use sophisticated exploration techniques to discover hidden mineral deposits. Geochemical exploration is one of one of the new methods of prospecting in which systematic measurements of one or more chemical properties of naturally occurring materials is made to detect anomalies related to mineralisation.

During 1972, a geochemical prospecting programme has been accomplished in the Temburong - Belalong catchment and stream sediments have been collected and analysed for trace quantities of mercury, copper and zinc. The results of this survey show that although quantities of these elements do occur in trace amounts, there are no significant anomalies which might indicate the presence of mineralised rocks.

Detailed geological mapping has also been carried out in selected areas to elucidate the complicated geology. An extension of the Batu Apoi limestone has been discovered in southern Temburong but this rock has not been found in economic quantities. Re-surveying has also shown that there are abundant reserves of quartzitic sandstone in the headwaters of the Temburong river; this rock is an important source of building aggregate but its remote situation prevents economic exploitation at the present time.

PRODUCTION

Investigations were also conducted into the possibility of hydro-electricity generation on the Temburong river. Dry-weather flow measurements indicate that the river is too small to generate the power requirements of an aluminium smelter.

Labelled tracer was used to investigate the movement of beach sand and rate of erosion on the coast at Jerudong and beach profiles measured at nine points on the seaboard coastline to monitor longshore drift. From these studies, it is possible to calculate the quantities of beach sand which may be removed safely without upsetting the natural regime.

An experimental study of the firing characteristics of brick-earths and clays found at various localities shows that good quality bricks may be manufactured provided there is stringent control over the preparation of the raw material and adequate temperatures are achieved to fire the material properly. It is evident from this research that firing temperatures in local kilns are insufficient to produce quality bricks; wood fired kilns reach 800°C but there is considerable improvement on the final product if the firing temperature is raised to 900°C . Some white clays particularly those found in Quaternary terraces, appear to be kaolinitic and could become a useful source of raw material for a ceramics industry.

In addition to the Survey's policy of searching for and evaluation of industrial raw materials, a start has been made into the field of micropaleontology. One of the Survey's professional officer is now engaged upon a study of foraminifera extracted from oil-well samples. The aim of this study is to build a reference collection of microfossils which can be used to date rocks encountered during the course of oil exploration.

PRODUCTION

Exploitation of gravel deposits declined during the year with the completion of several major constructional projects which required immense quantities of building stone. Building sand continued to be won from the coastal beaches and the Shell Company introduced a drag-line to win sand at Anduki for the construction of a safety barrier at the new oil tank farm in Seria. Brick production was maintained by six kilns all located in West Brunei.

The Geological Survey cost \$138,181.08 and of this amount, \$84,380.64 was expended on staff salaries and \$27,874.97 on recurrent expenditure. Capital expenditure totalled \$25,925.47 and was used to purchase a micropaleontological reference library, new microscope and a work boat and engine.

The department continues to be indebted to the officers of the Air Wing, Royal Brunei Malay Regiments for their ready assistance in providing helicopter support for field operations in remote areas of the State. The surveys in Temburong District would have been prolonged greatly without this rapid transportation.

CHAPTER 8

SOCIAL DEVELOPMENT

(A) EDUCATION

INTRODUCTION

1. Formal education in Brunei began in 1912 with the opening of a small Malay Vernacular School in Brunei Town. Records show that there were 53 boys on the roll in 1912 but the number seems to have fallen in the next two years. The 1914 Annual Report states: "There is a small Malay Vernacular school in Brunei Town with about 40 boys attending". A register kept in the Education Office gives the names of 756 boys who had enrolled in the school during the period 1912-1929.

The first Chinese-medium school was opened in 1916 and the first English-medium school, an Anglican S.P.C. Mission Primary school, in 1931. The first Malay-medium school for girls was opened in 1930.

2. Statistics show that by 1941 on the eve of Japan's entry into the Second World War there were 24 Malay-medium schools in the State with a total enrolment of 1,746 pupils, including 312 girls. There were also 140 pupils in Mission English-medium school and 274 pupils in Chinese-medium schools.

3. During the Japanese occupation of Brunei, education suffered a setback. Most of the school were closed and some of the school buildings were destroyed. Schools were however, rapidly re-established after the war and by the end of 1947 enrolment was up to the 1941 level. Continuous expansion since then brought total enrolment in all educational institutions in the State in 1972 up to 44,567 an increase of 1,737 over the enrolment of 42,830 in 1971.

THE PRESENT EDUCATIONAL SYSTEM

4. Schools are classified according to their language of instruction: this being either Malay, English or Chinese (Mandarin). Malay-medium and English-medium schools works a 5-day week, Chinese-medium schools a $5\frac{1}{2}$ -day week. The only teacher-training institution, the Government-administered Sultan Hassanah Bolkiah Teachers' College, and the two trades schools, also work a 5-day week. All educational institutions work a 3-term year commencing in January. The Government has decreed that Government-administered schools must be closed during the fasting month, Ramadhan, Which, because it is subject to lunar reckoning, has different dates each year. The main annual school holiday is arranged to being a few days before, and to end a few days after, Ramadhan. The structure of the educational system is shown diagrammatically in Appendix XVI.

5. Statistics of pupils, student-teachers and teaching staff in 1972 are given in Appendices I to IX.

6. A survey carried out in 1969 showed a high incidence of repetition in Government schools and underlined the need to formulate rules to control repetition at all levels. The rules limit repetition to Malay primary standards IV and VI, English Preparatory III, and Malay or English secondary Forms 3, 5 and Upper 6 and only one repetition of any of these classes is permitted; except that further repetition of Form 6 may be permitted in special circumstances. Promotion after a repeat year is automatic up to Secondary Form 3, but promotion to Secondary Form 4 and Form Lower 6 depends on the pupils' results in the Malaysian L.C.E. Examination and the Joint M.C.E./G.C.E. O level examination, respectively.

SOCIAL DEVELOPMENT

7. The present system is designed to allow the implementation of the Government aim of providing free primary and secondary education for all children who are citizens. Although there is a change in the language of instruction from Malay to English for some pupils at secondary level, the Syllabuses in all Government secondary schools have common content and they lead to examinations which are identical in subject and standard.

8. The Commission on Education, which started its work in 1970, continued its work in 1972. The Commission's report had not been published at the end of 1972.

PUBLIC EXAMINATIONS

9. Pupils in secondary schools sat for the following public examinations in 1972:

- (i) The Malaysian Lower Certificate of Education (L.C.E.), in either the Malay or the English-medium. This examination is taken after three years of secondary education.
- (ii) The Joint Examination for the Malaysia Certificate of Education (M.C.E.) and the General Certificate of Education (G.C.E.) O level in either the Malay or English-medium. This examination is taken after 5 years of secondary education.
- (iii) The Joint Examination for the Cambridge Higher School Certificate (H.S.C.) and General Certificate of Education (G.C.E.) A Level in either the Malay or English-medium.

SOCIAL DEVELOPMENT

10. The Examinations Section took over the administration of the following examinations:-

- (i) English School Entrance Examination. The Examination is taken by pupils in Standard IV Malay medium schools.**
- (ii) Standard VI Examination. This Examination is taken by pupils in Standard VI Malay-medium schools.**
- (iii) The Primary Certificate of Education Examination. This Examination is taken by pupils in Primary Standard VI in Mission schools and pupils in Preparatory III in Government English-medium schools.**

Formerly, (i) and (ii) were administered by the Malay Section of the Department and (iii) was administered by the English Section.

11. The Examinations Section also supervised examinations in Brunei for other examining bodies, including the Royal Society of Arts, London Chamber of Commerce and the City and Guilds of London Institute.

12. Statistics of public examination results in 1972 are given in Appendix X.

SOCIAL DEVELOPMENT

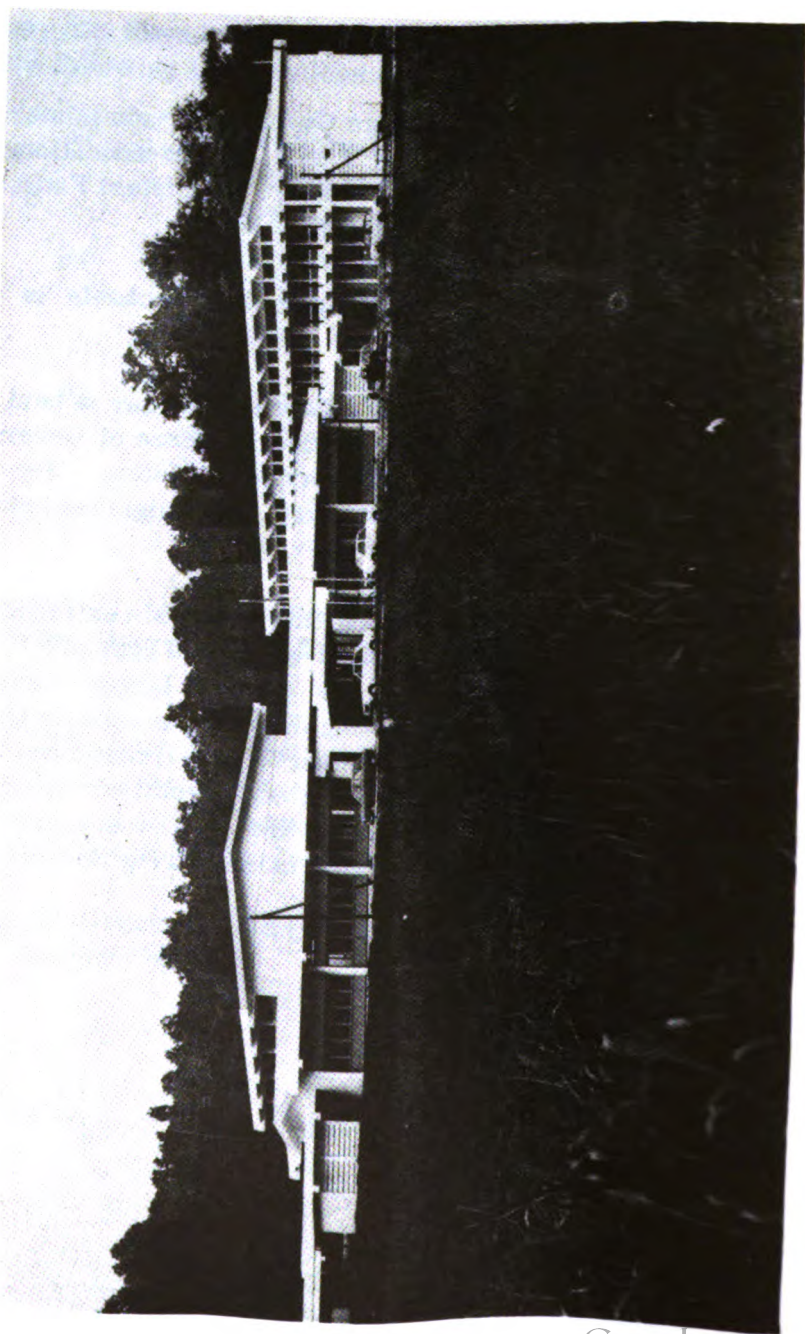
MALAY-MEDIUM EDUCATION

13. All Malay medium schools are Government-administered and all, except for one primary school, are co-educational. The one exception is the Sekolah Melayu Raja Isteri Fatimah in Bandar Seri Begawan. It is for girls only.

14. The primary course in Malay-medium schools is of 6 years' duration (Standard I-VI).

An examination at the end of the fourth year is held to select pupils for entry into the preparatory classes of Government English-medium schools, where pupils follow a 3-year course to prepare them for entry into English-medium secondary schools.

15. Not all the Malay-medium primary schools extended to Standard VI. The pupils who have completed Standard IV in some rural primary schools are sent to larger primary schools which are within walking distance; and pupils from rural schools which extend to Standard V are transferred to a central primary school in an urban or semi-urban area. Pupils in the latter group are given free daily transport or a subsistence allowance of \$45.00 a month during term-time.



The New Gadong Malay School.

MALAY MEDIUM PRIMARY EDUCATION

16. The total enrolment in Government Malay-medium primary schools at the end of 1972 was 16,439 comprising of 8,661 boys and 7,778 girls as compared to the total enrolment at the end of 1971 amounting to 16,569. The following is a comparative table of enrolment for the years 1968 to 1972:

TOTAL ENROLMENT IN MALAY PRIMARY SCHOOLS			
Year	Boys	Girls	Total
1968	8317	7877	16,194
1969	8192	7887	16,079
1970	8106	7613	15,719
1971	8672	7897	16,569
1972	8661	7778	16,439

The total shows a decline in enrolment from 1968 to 1970. This decline can be ascribed to several factors: the progressive advance toward full primary enrolment, an increasing proportion of transfers to English-medium preparatory schools after Standard IV and the reduced repetition of classes following the new rules on repetition which became effective in 1970.

17. Beginning from 1971 the enrolment shows an upward trend, this was due to the fact that a decision, made in 1970 to lower the age of admission to school from $5\frac{1}{2}$ years to 5 years, became operative in January, 1971. Thus in 1971 and 1972 all children who had attained their fifth birthday before 1st January, 1971 and 1st January, 1972 respectively were admitted to school. The decline in the 1972 enrolment over that of 1971 is mainly due to the large increase in the 1971 intake totalling 4202 as compared to 3311 in the 1972 intake.

SOCIAL DEVELOPMENT

18. Annual intakes of pupils by Malay-medium primary schools over the past 12 years are tabulated below. It should be noted, however, that the large increase of the 1971 intake over the 1970 intake is mainly due to the fact that the former consists of children born over a period of one and a half years.

Year	Boys	Girls	Total
1961	91	244	335
1962	91	249	340
1963	185	215	400
1964	127	273	400
1965	414	463	877
1966	381	416	797
1967	465	535	1000
1968	782	783	1565
1969	1091	1146	2237
1970	1162	1110	2272
1971	2211	1991	4202
1972	1639	1692	3331

SOCIAL DEVELOPMENT

19. Malay-medium primary schools are organised on a district basis, each district being administered by an officer with the designation Inspector of Malay schools. In 1972 there were 7 such districts, their names and the number of schools in each listed below:

Brunei I	9	schools
Brunei II	22	"
Brunei III	15	"
Tutong I	12	"
Tutong II	18	"
Belait	12	"
Temburong	15	"

Total: 103 schools

=====

54 schools occupied permanent buildings and 49 temporary buildings.

20. A total of 958 teachers were teaching in all Malay-medium primary schools in the state. Out of this amount, 644 were males and 314 females. 15 of these teachers were promoted to Special Grade. Teachers serving in the most isolated rural schools - Amo, Kinua, Binutang Kampeng Bukit, Panchong, Supon, Belabau, Hiang Tengah, Selangan, Nagalang, Semabat, Melilas, Sukang and Merangking - received an Isolation Allowance of \$30.00 per month to compensate for the higher cost of living in these rural areas.

SOCIAL DEVELOPMENT

21. Good attendance in Malay-medium primary schools was a laudable feature in the Brunei educational scene. The monthly percentage attendance according to districts in all Malay-medium primary schools in 1972 was:-

1.	Brunei I	96.89%
2.	Brunei II	97.39%
3.	Brunei III	98.66%
4.	Tutong I	97.88%
5.	Tutong II	98.23%
6.	Belait	97.12%
7.	Temburong	98.06%

22. A total of 1929 pupils from Malay-medium primary schools was selected on the results of the English School Entrance Examination for entry into English-medium Preparatory I in 1973.

23. The two new temporary Malay-medium schools, one at Kampong Tungku and the other at Kampong Tamoi, which were built by villagers with financial aid from Government were completed. The school at Kampong Tamoi was opened during the year and the other is expected to open early in 1973. Addition to the existing permanent school at Lumapas was also completed during the year.

24. Owing to the shortage of classrooms, a number of additional temporary buildings have been built to accommodate the increasing number of pupils each year. It was still necessary, however, to have double sessions, one in the afternoon, especially in the urban areas. Several lavatories were also built in the temporary schools for the benefit of teachers and pupils.

25. Only one Class F quarter was built in 1972; it was built for Lumapas. Two other temporary teachers' quarters of medium size were also built according to plans made by the Education Department. There is still a shortage of teachers' quarters both in the urban and rural areas, and often teachers have to travel long distances from their own homes to schools and have to be paid a house-to-school travelling allowance.

26. At the end of 1972 the Education Department has arranged for English Language to be taught in all Malay primary schools in the State from Standard I to VI under the supervision of the Head Teachers. Some schools manage to start English lessons, while others did not as there was a shortage of teachers with the required knowledge of the English language. The problem has since been solved with the introduction of courses by the Education Department for teachers in all Malay primary schools to study the language.

27. During the year the Physical Education section arranged and supervised an extensive programme of inter-school competitions. This included cross country running, athletics, football, hockey, badminton, volleyball, sepak takraw, netball and swimming. These competitions started in the school where school teams were selected. Schools teams then competed against other schools from the same school district. District representatives were selected and they met representatives from other districts in the State finals, which were held in the capital, Bandar Seri Begawan.

28. As in previous years, Education Days were held during June. On Education Day parents and other adults who live in the vicinity of the school, are invited to come to the school to see the work being done and to meet the school staff. Each school sets its own date for Education Day but before the State-wide Education Day programme begins, it has become

SOCIAL DEVELOPMENT

the custom to hold an inaugural ceremony in Bandar Seri Begawan. Yang Teramat Mulia Duli Pengiran Pemancha officiated at the ceremony which was held on the 10th June, 1972. Afterwards, he and many invited guests, saw groups of pupils perform colourful mass drills and dances.

MALAY-MEDIUM SECONDARY EDUCATION

29. There was a slight decrease in the enrolment in Malay-medium secondary schools in 1972; a total of 3858 as compared with 4569 in 1971. The reason for the decrease was because a number of students left school: some of these students have failed twice in their examinations, some were in search of jobs and some were admitted to the Teachers College while others left Brunei for studies overseas.

30. No new additional classrooms were provided for Malay secondary schools in 1972. Muhammed Alam Malay Secondary School introduced Form 3 for the first time; 120 pupils sat for their S.R.P. examination during the year. Muda Hashim Malay Secondary School had its first Form 4 classes with 92 pupils.

31. Form IV students from Ahmad Tajuddin Malay Secondary school were accommodated in the Muda Hashim Malay Secondary School, thus reducing the pressure for more classrooms at Maktab Melayu Paduka Seri Begawan Sultan at Jalan Muara. It was not possible to have Form IV at Ahmad Tajuddin Malay Secondary School due to the unavailability of the building and also of the insufficient number of classrooms in the school.

32. The shortage of equipment in science laboratories has become more acute, especially in Ahmad Tajuddin Malay Secondary School, Mohammad Alam Malay Secondary School

SOCIAL DEVELOPMENT

and Sultan Hassan Malay Secondary School at Bangar. The programmes to have a science laboratory both at Admad Tajuddin Malay Secondary School and Mohammad Alam Malay Secondary school have also been unsuccessful. Three Malay-medium secondary schools have as yet no gymnasium.

33. The staffing of the Malay-medium secondary classes has improved because of the arrival of teachers from Singapore to teach Mathematics, Science, Domestic Science and English Language. Likewise with the senior secondary Classes, staffing has also improved with the arrival of 3 local graduates who returned to Brunei after completing their studies abroad.

In-service courses were given to teachers who are to teach Integrated Science to students in Form I in 1972.

34. For the first time, 4 Form VI students from Maktab Melayu Paduka Seri Begawan Sultan obtained full certificates in the Higher School Certificate Examination.

ENGLISH-MEDIUM EDUCATION

35. English-medium schools in Brunei are either administered by Government, Missions or other private organisations. Government English-medium schools are fully financed by the Government. The others receive no financial assistance from the Government.

36. The Government English-medium schools offer a three-year preparatory course leading to secondary courses of either three years up to Malaysia L.C.E. or five years up to Malaysian Certificate of Education/G.C.E. O level, or seven years up to Cambridge Higher School Certificate/G.C.E. 'A' level. Preparatory classes are designated Prep. I, II and III; secondary classes are designated Forms I, II, III, IV, V, Lower VI and Upper VI.

37. Mission and other unassisted English-medium primary schools offer a six-year primary courses (standards I to VI) while at secondary level the pattern is the same as for Government English-medium schools. One Mission school extended to Form Upper VI.

GOVERNMENT ENGLISH-MEDIUM SCHOOLS

38. In 1972 preparatory courses were available in Anthony Abell College, Seria, in the Perdana Wazir English School, Kuala Belait, in the Sufri Bolkiah English School and in the Brunei Preparatory School and its annexes in some Malay primary schools.

The first three schools had secondary departments, but the Brunei Preparatory School operated independently as a preparatory school. Its principal was also responsible for the supervision of the preparatory classes in the following Malay schools: S. M. Muara, S. M. Amar Pahlawan, S. M. Anggerek Desa, S. M. Sengkurong, S. M. Kilanas, S. M. Sultan Hassan, Bangar, S. M. Pengkalan Batu, S. M. Lambak, S. M. Sungai Hanching, S. M. Gadong and S. M. Dato Gandhi.

39. The total enrolment in preparatory classes in 1972 was 6,272. Of this total 4,118 were enrolled in the Brunei Preparatory School and its annexes in the Malay primary schools referred to in the previous paragraph. Of these 1,857 were in the annexes.

40. With the separation in January, 1972 of the S. O. A. S. College into two schools, S. O. A. S. (Senior Secondary) and S. O. A. S. (Junior Secondary), this raised the number of Government English-medium secondary schools to seven, the other five being:-

SOCIAL DEVELOPMENT

1. Sekolah Tinggi Perempuan Raja Isteri (S.T.P. R.I.), Bandar Seri Begawan.
2. Berakas English School (B.E.S.) Bandar Seri Begawan.
3. Sufri Bolkiah English School (S.B.E.S.), Tutong.
4. Anthony Abell College (A.A.C.), Seria.
5. Perdana Wazir English School (P.W.E.S.), Kuala Belait.

Berakas English School became a full Junior Secondary School in 1972, whilst Perdana Wazir English School had Form V classes for the first time.

41. The total enrolment in English-medium secondary schools in 1972 was 5,077.

42. The continuing expansion of English-medium education is illustrated by the following comparative table which shows the increases in enrolment at both preparatory and secondary levels in 1972 over the figures for 1971, expressed both numerically and as percentages. The increases in 1971 over 1970 are appended for comparison.

TOTAL ENROLMENT

	PREPARATORY			SECONDARY			TOTAL		
	B	G	T	B	G	T	B	G	T
1971	2825	2841	5666	2247	1868	4115	5072	4709	9781
1972	3113	3159	6272	2715	2362	5077	5828	5521	11349

SOCIAL DEVELOPMENT

1971	338	313	606	468	494	962	756	812	1569
% Increase	11.1	11.1	10.7	20.8	26.4	23.4	14.9	17.2	16

PERCENTAGES IN 1971 OVER 1970 ENROLMENT

1971	338	430	738	353	454	837	691	884	1585
% Increase	11.1	17.9	14.9	10.5	32.1	25.6	15.8	23.1	19.3

As it will be seen from the above table the increase in 1971 at intermediate level compared with the 1971, is slightly over 11.7 percent, but again there was a significant increase at secondary level of 23.4 percent. There has been a corresponding expansion in absolute terms though the rate of expansion has slowed down. The percentage of girls in the intermediate enrolment in 1972 was just over 50, the same as in 1971 and in the secondary enrolment 46.5 compared with 45.5 in 1971.

Accompanying these increasing numbers continue to be a rapid programme. All school buildings are now being replaced with the exception of Perdana Wazir I and Sultan Ismail Sultan.

In a further move a new method of Teaching English as a Second Language was introduced into two Brunei primary schools namely Sultan Pahlawan and Anggerek.

The new wing opened at Anthony Abell College, and the new and new hospitals at Perdana Wazir I and Sultan Ismail. The new wing opened in 1972. The new wing and the new average schemes in Seremban and the new wing.

It is a major problem, particularly in the primary school level. Many vacancies for teachers.

SOCIAL DEVELOPMENT

remained unfilled, as recruitment had not been very successful. Hence, more and more reliance has to be placed on teachers from the local Teachers' Training College.

Another factor aggravating the difficulty was the fact that English had been introduced into the Malay Primary school curriculum, and more English language teachers were therefore required, and some teachers from English schools had to be posted to Malay schools.

47. A total of 1,729 pupils were selected for entry into English Preparatory Form I in 1973.

MISSION ENGLISH-MEDIUM SCHOOLS

48. There were no addition to Mission English-medium schools in 1972. All seven Mission institutions continued to have ten, primary and secondary sections. Five of them are co-educational: St. George's and St. Regawan; St. Margaret's Seria; St. Michael's Belait. St. Michael's Seria, had some girls in Form 6. St.

led to secondary
St. Margaret's
Michaels ex -

6710

OTH

51. T
school at P

SOCIAL DEVELOPMENT

Increase in 1972.	288	318	606	468	494	962	756	812	1569
% increase	10.1	11.2	10.7	20.8	26.4	23.4	14.9	17.2	16
	INCREASES IN 1971 OVER 1970 ENROLMENT								
Increase	308	430	738	383	454	837	691	884	1585
% increase	12.2	17.8	14.9	20.5	32.1	25.6	15.8	23.1	19.3

43. As it will be seen from the above table the increase in 1972 at preparatory level, compared with the 1971, is slightly lower at 10.7 percent, but again there was a significant increase at secondary level of 23.4 percent. There has been a considerable expansion in absolute terms though the rate of expansion has slowed down. The percentage of girls in the preparatory enrolment in 1972 was just over 50, the same as in 1971 and in the secondary enrolment 46.5 compared with 45.4 in 1971.

44. Accommodation for these increasing numbers continued to be a major problem. All school buildings are now in double sessions with the exception of Perdana Wazir English School, Kuala Belait.

On a happier note a new method of Teaching English as a Foreign Language was introduced into two Brunei Preparatory School annexes Amar Pahlawan and Anggerek Desa.

45. The new girls' hostel at Anthony Abell College, Seria, and the new girls' and boys hostels at Perdana Wazir English School, Kuala Belait, remained unopened in 1972. They cannot be opened until the new sewerage schemes in Seria and Kuala Belait are completed.

46. Staffing continued to be a major problem, particularly at the Secondary school level. Many vacancies for teachers

SOCIAL DEVELOPMENT

remained unfilled, as recruitment had not been very successful. Hence, more and more reliance has to be placed on teachers from the local Teachers' Training College.

Another factor aggravating the difficulty was the fact that English had been introduced into the Malay Primary school curriculum, and more English language teachers were therefore required, and some teachers from English schools had to be posted to Malay schools.

47. A total of 1,729 pupils were selected for entry into English Preparatory Form I in 1973.

MISSION ENGLISH-MEDIUM SCHOOLS

48. There were no addition to Mission English-medium schools in 1972. All seven Mission institutions continued to run Kindergarten, primary and secondary sections. Five of the institutions are co-educational: St. George's and St. Andrew's Bandar Seri Begawan; St. Margaret's Seria; St. James's and St. John's Kuala Belait. St. Michael's Seria, has boys only up to Form 5 but has some girls in Form 6. St. Angela's, Seria, is for girls only.

49. St. John's and St. James's extended to secondary Form III only in 1972; St. Andrew's St. George's St. Margaret's and St. Angela's extended to Form 5; and St. Michael's extended to Form VI.

50. Total mission school enrolment increased from 6710 in 1971 to in 1972.

OTHER UNASSISTED ENGLISH-MEDIUM SCHOOL

51. The Brunei Shell Petroleum Company's primary school at Panaga has an enrolment of 231 in 1972. The school

SOCIAL DEVELOPMENT

is for the children of the company's senior staff and it offers primary courses through both the medium of English and through the medium of Dutch. The Borneo Chartered Institute, Kuala Belait, is no longer in existence.

CHINESE-MEDIUM EDUCATION.

52. All Chinese-medium schools are unaided now. These schools continued to function under the same system as before that is, managed by School Management Committees under the supervision of the Chief Inspector of Chinese Schools who is responsible to the Director of Education.

53. The number of Chinese-medium schools remained at eight. Six of the eight schools ran Kindergarten Classes. All of the schools had full Primary sections, three extended to Junior Middle level and two to Senior Middle Level.

Total enrolment in the eight schools increased slightly from 5406 in 1971 to 5443 in 1972, as follows:-

Year	Kinder garten	Primary	Junior Middle	Senior Middle	TOTAL
1971	783	4046	435	142	5406
1972	847	4037	405	154	5443

54. Twenty Senior Middle School leavers in 1972 gained admission to various universities and colleges in Taiwan, Singapore, Canada and Hong Kong. Eleven graduates returned to Brunei after completing their studies overseas.

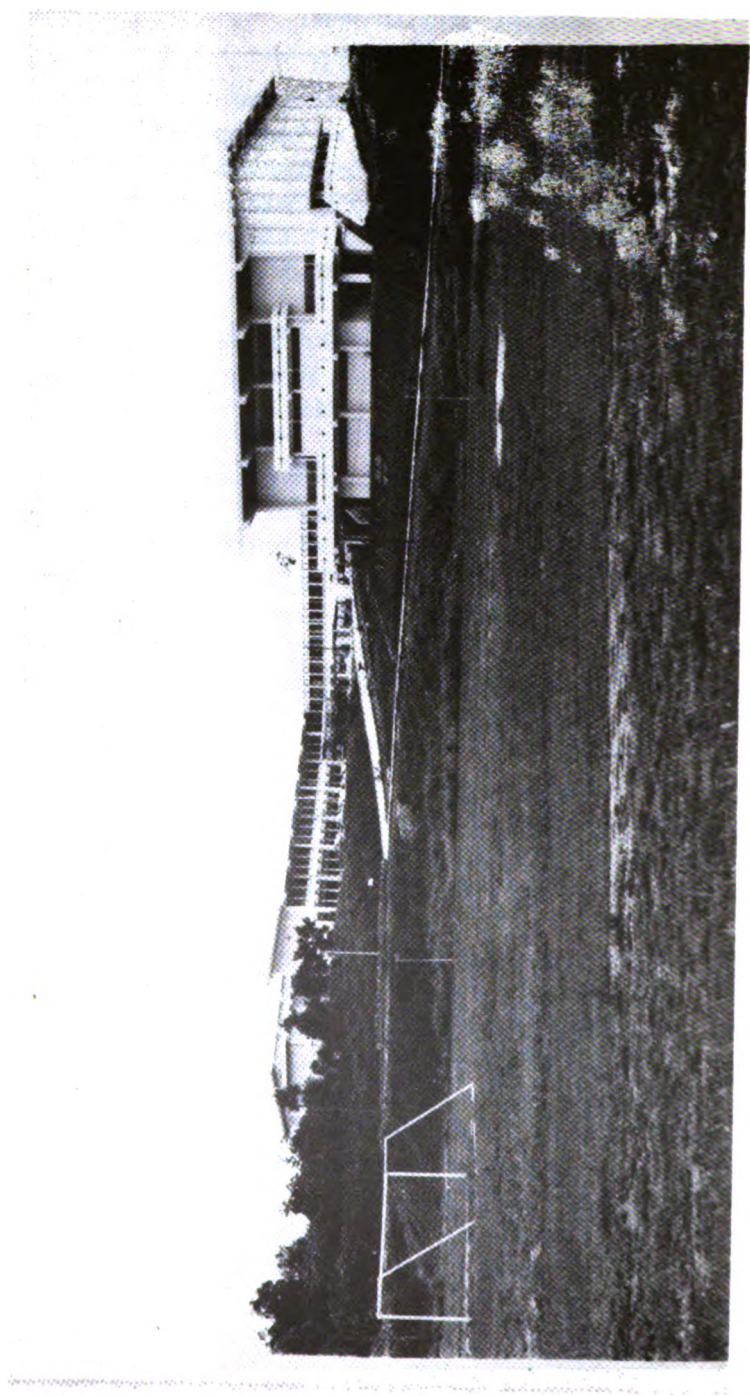
TECHNICAL EDUCATION

55. There are two trades schools: the Building Trades School, Jalan Muara (about 5 miles from Bandar Seri Begawan) and the Engineering Trades School in Kuala Belait.

56. The two schools are housed in new modern buildings. The first students were admitted in September, 1971. Students are selected from applicants who have completed three years of secondary education and have passed in the Lower Certificate of Education examination, preference being given to those with passes in Mathematics and Science. The courses in both schools are based on the syllabuses of the City and Guilds of London Institute.

57. During 1972 8 (eight) additional instructors were appointed. The enrolment in the Building Trades School was 84 and in the Engineering Trades School 58. Four instructors did not renew their contracts, after completion.

58. Carpentry and Joinery, brickwork, and painting and decorating were offered in the Building Trades School and a course in plumbing, scheduled to begin in 1972, has been delayed, due to the problems of recruitment of staff, but it is hoped to commence the course in 1973. All students in the Engineering Trades School completed the first-year general engineering course in preparation for later specialisation in milling and turning, welding and fabrication, electrical installation, and motor vehicle work. New courses in Refrigeration, Air Conditioning and Telecommunication were started.



The Hassanah Bolkiah Teachers Training College at Gadong was
officially declared open by His Highness the Sultan on 29th January, 1972.

59. The schools were built to provide workshop and hostel accommodation for a total of 816 students (528 in the Building Trades School and 288 in the Engineering Trades School). The anticipated capacity has not been obtained, due to the difficulties experienced in the recruitment of qualified instructors, but it is hoped that this will be resolved within the near future.

60. The Brunei Shell Petroleum Company continued to run its Artisan Training Centre in Seria during 1972. A total of 106 trainees were taking a 3-year course leading to the City and Guilds of London Institute's Course 833 (Basic Engineering Trades) examination.

TEACHER TRAINING

61. The most outstanding event of the year in the annuals of Educational development in Brunei was the official opening of the new College building complex at Gatong on Saturday, 29th January, 1972 by His Highness the Sultan of Brunei, Duli Yang Maha Mulia Paduka Seri Baginda Sultan Sir Hassanah Bolkish Muizzadin Waddaulah Ibni Duli Yang Teramat Mulia Paduka Seri Begawan Sultan Sir Muda Omar Ali Saifuddin Sa'adul Khairi Waddin, in the presence of a distinguished gathering of State dignitaries and over 1,500 people representing various sections of society in the State of Brunei. Some photographs of this event are included in the pictorial section.

To mark this historic event His Highness the Sultan graciously consented to rename the College as Sultan Hassanah Bolkish Teachers College, Brunei.

62. The plan for this central residential teachers' College complex as a single integrated higher institution for the training of bilingual teachers in Brunei was approved in 1966

and was completed in its present form in March, 1971. The trainees were moved from Berakas to the new College at Gadong on 1st April, 1971.

63. The College is laid in a pictureque setting in a healthy rural and pollution-free environment. The main teaching block is built on a rocky rise behind the Brunei Electric Power Station. It consists of the Following blocks:

- (a) 13 General lecture rooms, two science laboratories, a library, one education room, one audio-visual rooms, two home science rooms, one art and craft room, one staff lounge, essembly and seminar foyers and administratives offices.
- (b) An auditorium with a seating capacity for 500 persons with rooms for stores, toilets and canteen in the basement.
- (c) A modern Gymnasium with toilets and changing rooms.
- (d) Two hostel blocks - one for boys and one for girls - providing comfortable accomodation for 400 trainees, with a spacious first floor dining hall, a modern kitchen, two common rooms, two sickbays, a dental clinic, washrooms, laundry rooms, toilets with modern sanitation and a store rooms.
- (e) A prayer room (surau).
- (f) A standard size running track skirting a turfed field.
- (g) A Malay Primary School.

64. In the afternoon of January 29th 1972, the first convocation in the new Gymnasium was held. The Honourable Mentri Besar of Brunei Yang Amat Berhormat Pengiran Setia Negara Pengiran Haji Mohd. Yusof bin Pengiran Haji

SOCIAL DEVELOPMENT

Abdul Rahim presided over this function and gave away 215 certificates to successful teachers from the College.

65. The College enrolment for 1972 was 326 comprising of 189 boys and 137 girls. 295 training were studying in Group A and only 31 were in the last batch of Group B.

66. While the general policy of the College is to train general purpose bilingual teachers for Primary and Preparatory Schools in Brunei, facilities were added to the College during the year under review to give each trainee a choice of 2 school subjects which he could study at an advanced level in order to be able to teach these subjects in Secondary Schools up to Form III level if required to do so.

67. Courses in New Maths, Integrated Science, Home Science and Art and Craft are now available at the College for students who show the required aptitude to specialise as teachers of these subjects.

68. During 1972, the following inservice courses for practising teachers were held in this College:-

1. From April 16th to 21st April 1972. Headmasters' Refresher Courses. Its purpose was to familiarize the heads of Primary Schools with the latest development in audio-visual teaching aids.
2. From April 16th to 21st April 1972. A Course for Teachers of English in Malay Primary School. The purpose of this course was to introduce and demonstrate the application of the situational method of teaching English as a second language.

SOCIAL DEVELOPMENT

3. **From July 8th to July 17th 1972. A Guidance Course in the teaching of English. This course was designed to train teachers of English who should be able to guide teachers of English in Primary Schools in adopting the new syllabus and methods of teaching English.**
4. **From July 17th to August 11th and also between December 16th and 20th. Several teachers of Maths attended the course held in the College for introducing new Maths both in Primary one and in Secondary one classes in Brunei Schools.**

69. **It is significant to note that many teachers and head-masters from schools in the State visited the College during the year to familiarize themselves with the type of work trainees do in the College and also to discuss any problem they have in the teaching of certain subjects in schools.**

70. **On the 30th of January 1972 the College observed its first open day and organised an exhibition teaching aids and demonstration lessons. It was a very successful and popular project and over 2,500 persons visited the various sections of the exhibition.**

71. **The future of the College is envisaged as a single integrated institution not only for basic teacher training, but also for providing opportunities for the advancement of professional and academic education of teachers in Brunei. As more facilities and specialized staff become available, the College will be able to undertake projects such as curriculum and syllabus construction and the publication of guidebook for teachers.**

THE SCHOOL FEEDING SCHEME

72. All pupils in Government schools continued to receive a free rice meal each school working-day in rural areas and free snacks and drinks in urban areas.

73. Rice meals consisted of rice with curried meat, fish or eggs, and local vegetables. Meat was either buffalo meat or chicken, and fish included sardines, salted fish and prawns, as well as white fish. Fresh apples, oranges or bananas are included in the menu at least twice a week. The cost of a full meal varied from 50 to 60 cents per pupil, depending on the degree of accessibility of the school.

74. In urban schools hot drinks were served together with biscuits or cakes. Fresh fruit was provided, usually twice a week. The average cost was 20 cents pupil per day.

SCHOLARSHIPS

75. Scholarships are administered by the Director of Education, Scholarship and Welfare Officer and his assistant, and generally controlled by a Scholarship Committee. The Committee was appointed by the Government as in previous years.

76. The Scholarship Committee consists of 6 members, with the Director of Education as Chariman and Scholarship and Welfare Officer as secretary.

The major responsibilities of the Scholarship Committee are as follows:-

1. To recommend to Government for the award of overseas scholarships.

SOCIAL DEVELOPMENT

2. To recommend the termination of the award of a scholarship if the progress or behaviour of the holder has not been satisfactory.
3. To consider applications for admission to Government English-medium secondary schools from Mission School pupils. Successful applicants who are not Brunei citizens are required to pay school fees of \$10, 00 per month.
4. To confirm the admission of student to the Sultan.
5. To process students' transfer to and from Government English Schools, and to confirm, a student's entitlement to one of the following: subsistence allowance, hostel accommodation, free tuition and free transport.
6. To select students from the Malay Schools for admission to Government English Preparatory Schools.
7. To consider applications for hostel places, subsistence allowances and free transport.
8. To deal with the welfare of the student in general.

INTERNAL SCHOLARSHIPS

77. All pupils who are Brunei Citizens and who are in Government Schools receive free tuition, which includes provision of all schools Materials, except for exercise books for Malay-medium Primary schools. Pupils who live more than three miles away from their places of study are given free full

SOCIAL DEVELOPMENT

board and lodging in a school hostel or a subsistence allowance of \$45.00 per month during term-time or free daily transport to and from school. Hostel boarders are transported free of charge between home and school at the beginning and end of each term. All Brunei pupils in Form 6, whether boarders in a hostel or day-pupils living within or beyond the three-mile limit receive an allowance of \$25.00 a month during term-time in addition to other assistance.

The hostels in 1972 are as below:

PLACE	Accommodation for		Accommodation in 1972		
	Male	Female	Male	Female	Total
1. Maktab Melayu Paduka Seri Begawan Sultan	600	400	318	150	468
2. Sekolah Melayu Pusuar Uluak	150	150	134	120	254
3. Sekolah Menengah Melayu Muda Hashim	200	200	140	100	240
4. Sekolah Melayu Muda Hashim	80	60	86	55	141
5. Sekolah Menengah Melayu Ahmad Tajuddin	36	-	34	-	34
6. S.O.A.S. College	240	-	228	-	228
7. S.T.P.R.I.	-	200	-	133	133
8. Sufri Bolikiah English School	200	200	180	155	335
9. Anthony Abell College	200	100*	127	-	127
10. Building Trade School	80	-	87	-	87
11. Engineering Trade School	288	-	55	-	55
12. Perdana Wasir English School	240*	240*	-	-	-
* These hostels are not yet in operation.					

SOCIAL DEVELOPMENT

79. As in previous years the Brunei Shell Petroleum Company continued to award bursaries to needy pupils in Government and Mission Secondary Schools. Nomination for a Shell bursary is done by the school principals and selected by the school principals and selected by the B.S.P. Co. Ltd. Renewal of awards is subject to the satisfactory progress of the holders.

80. 1972 students from Malay-medium Primary Schools throughout the state who were all under 12-year old were selected to transfer to Government English medium Preparatory Schools but 2 of them withdraw.

81. This year 15 new bursaries were awarded by the Company for M.C.E./G.C.E. 'O' level courses. 13 previous MCE/GCE 'O' level awards and 3 H.S.C./G.C.E. 'A' level awards were renewed. Each bursary is worth \$500.00 per annum.

EXTERNAL SCHOLARSHIPS

82. These scholarships are intended to enable persons who are Brunei citizens to pursue further studies overseas. Each scholarship is normally tenable for the minimum period necessary to enable the scholar to complete his course of study leading to a degree or a professional qualification which is recommended by the Scholarship Committee. Successful candidates will be required to sign an agreement with Government.

83. The number of Scholarships to be awarded each year is not fixed. Students who are offered scholarships will be entitled to receive the following allowances:

SOCIAL DEVELOPMENT

1. (a) MONTHLY SUBSISTENCE ALLOWANCE

Year of study	London	Students in	
		Elsewhere in U.K. and also in Australia, New Zealand, Canada and U.S.A.	Philippines Malaysia and Singapore
Pre-University	£ 70	£ 65	B\$150.00
1st Yr. Degree/ Dip.	£ 72	£ 70	B\$150.00
2nd Yr. Degree/ Dip.	£ 75	£ 70	B\$150.00
3rd Yr. Degree/ Dip.	£ 77	£ 72	B\$150.00
4th Yr. Degree/ Dip. and the subsequent year	£ 80	£ 75	B\$150.00

Note: The above monthly subsistence allowance is a new rate for students studying in London, or elsewhere in the United Kingdom and also in Australia, New Zealand, Canada and the United States of America; this rate was introduced with effect from 1st January, 1972.

(B) ALLOWANCE PAYABLE TO NURSES AND STUDENT ON SANDWICH COURSE

- i) Nurses and students on Sandwich Course will be paid the difference between the above allowance and the salary paid to them by the employer in

SOCIAL DEVELOPMENT

- accordance with the present regulation.
- ii) In this connection, Nurses undergoing 1st year S.E.N. Course will be regarded as equivalent to the students on 1st year Degree/Diploma Course. The same condition will apply to students on the 2nd and succeeding year.

2. AN ANNUAL BOOK ALLOWANCE IS PAYABLE ACCORDING TO THE FOLLOWING RATES:-

a)	U. K.	Australia	New Zealand	Canadian	U. S. A.	M'sia S'pore P'pines
Pre-University Degree/Diploma	£24 £36	A\$52 A\$77	NZ\$52 NZ\$77	C\$69 C\$103	USA\$64 USA\$95	B\$190 B\$255

SOCIAL DEVELOPMENT

b) Additional payment of Book Allowance will be considered provided that there is a supporting recommendation from the Principal of the school concerned.

3. MARRIAGE ALLOWANCE AND REGULATIONS:

Subject to the present terms and regulations set by Government, marriage allowances will be payable per annum to a male student studying in the United Kingdom and other temperate countries as follows:-

	U.K.	Australia	New Zealand	Canada	U.S.A.
a) Wife	£192	A\$411	NZ\$411	C\$550	USA\$507
b) 1st child	£ 66	A\$142	NZ\$142	C\$189	USA\$175
c) 2nd child	£ 42	A\$ 90	NZ\$ 90	C\$121	USA\$111
d) 3rd child etc.	£ 36	A\$ 77	NZ\$ 77	C\$107	USA\$ 95

4. TRAVELLING ALLOWANCE::

Travelling allowance may be paid monthly to students at the following rates:-

U.K.	Australia	New Zealand	Canada	U.S.A.	Malaysia Singapore Philippines
£4.50	A\$10	NZ\$10	C\$13	USA\$12	B\$30

SOCIAL DEVELOPMENT

5. OUTFIT ALLOWANCE:

The following allowances are payable annually to students studying in the United Kingdom and other temperate countries:-

a) New students	£60	A\$129	NZ\$129	C\$172	US\$159
b) Old students	£24	A\$ 52	NZ\$ 52	C\$ 69	US\$ 64

6. EXTENSION OF ALLOWANCE:

Students who have completed and passed their courses successfully but are not employed immediately will continue to receive subsistence allowance.

7. EDUCATIONAL TOUR ALLOWANCE

On successful completion of his/her studies, a student may take an educational tour prior to his final return to Brunei. The tour must not exceed three weeks and an allowance of £30 (or A\$65, or NZ\$65, or CAN\$86, or US\$80) will be paid. Students who do not avail themselves of this opportunity will not be paid this allowance

8. SHIPMENT OF PERSONAL EFFECTS:

Shipment of personal effects of students who have completed their course will be sea-freight as follows:-

- | | | |
|----|--|----------------------------|
| a) | Unmarried student or student |) |
| | Married to another scholarship student |) not exceeding 40 cu. ft. |

SOCIAL DEVELOPMENT

- b) **Married student whose family) not exceeding**
 is with him) 80 cu. ft.

9. **Other payments will be in accordance with existing regulations.**

In addition to the above allowances, tuition fees and air passages are also paid by Governemnt. Students studying in the United Kingdom and other temperate countries will be given biennial free passage to Brunei and return, whilst students studying in Malaysia, Singapore and the Philippines are given annually.

84. **The fund, placing, etc. of the Scholarship students in the United Kingdom are administered by the Brunei Government agency, Student's Unit London. Students in other places are administered directly by the Education Department Brunei.**

85. **Applications for scholarships must be submitted to the Secretary of the Scholarship Committee on prescribed forms, copies of which can be obtained from the Department of Education Bandar Seri Begawan. The closing date for the submission of applications is announced in local newspapers by the Director of Education.**

86. **The number of students awarded for oversea scholarships in 1972:-**

SOCIAL DEVELOPMENT

	Singapore		Malaysia		U, K.	
	Male	Female	Male	Female	Male	Female
1. Secondary Education (Malay Medium)	10	-	4	2	-	-
2. Secondary Education (English Medium)	10	-	-	-	35	13
3. Diploma Courses	-	-	4	-	-	-
4. Degree Courses	-	-	3	-	1	-
Total	20	-	11	2	36	13

Grand total= 82 students

87. Full particulars of Brunei students studying overseas in 1972, including the subjects being studied and the level of the course, and showing Government and non-Government scholarship students separately, are given in Appendix.

88. All Brunei Government Scholarship students in Singapore are boarded in the Brunei Government hostel at Tanglin Hill.

A list of Government scholarship students who completed their course and returned to Brunei in 1972 is appended below:

SOCIAL DEVELOPMENT

BRUNEI GOVERNMENT STUDENTS WHO COMPLETED THEIR COURSES AND RETURNED TO BRUNEI IN 1972

	Sex	Institution	Qualification
1. Kamariah bte Hj. Abd. Wahab	F	Herford County Hospital, England	State Enrolled Nurse
2. Md. Salleh bin Omar	M	College of Agriculture Malaysia, Malaysia	Diploma in Agriculture
3. Ak. Ibrahim b. Pg. Md. Salleh	M	College of Agriculture Malaysia, Malaysia	Diploma in Agriculture
4. Abu Bakar bin Hj. Apang	M	University of Malaysia, Malaysia	B.A. (Malay)
5. Alidin bin Othman	M	University of Malaysia, Malaysia	B.A. (History)
6. Ahmad bin POKING Hj. Md. Yusof	M	University of Western Australia, Australia	B.A. (Politics & Economics)
7. Ahmad bin Hj. Ibrahim	M	Manchester University, U.K.	M. Science (Mech. Engineering)
8. Abd. Majid B. Abd. Rahman (B. Sc. Biochemistry)	M	Southampton General Hospital, U.K.	Practical Laboratory Training
9. Azizah bte Ismail	F	Institute of Ed. University of Exeter, U.K.	Teaching English as a 2nd Language
10. Sahara bte Ahmad	F	Institute of Ed. University of Exeter, U.K.	Teaching English as a 2nd Language
11. Ibrahim bin A Rahman	M	Institute of Ed. University of Exeter, U.K.	Teaching English as a 2nd Language
12. Ismi bin Ahmad	M	Moray House College of Ed. Edinburgh, U.K.	Teaching English as a 2nd Language
13. P. Hashim bin P. Chuchu	M	School of Education University of Birmingham	Headmaster Course
14. Zainal bin Husair	M	City of Leeds and Carnegie College of Ed.	Physical Education
15. P. Shabbuddin b. P. H. Tongah	M	Brighton Polytechnic, U.K.	Art and Craft
16. Ak. Damit bin Pg. Ahmad	M	Brighton Polytechnic, U.K.	Art and Craft
17. Noriah bte Abas	F	Langham Secretarial College, U.K.	Secretarial Certificate
18. Sukarni bte Hj. Abd. Kadir	F	Langham Secretarial College, U.K.	Secretarial Certificate

SOCIAL DEVELOPMENT

19.	Rosnah bte Md. Hassan	F	Kingston College of Further Ed., U.K.	Secretarial Certificate
20.	Safiah bte Md. Taha	F	Kingston College of Further Ed., U.K.	Secretarial Certificate
21.	Fatimah bte Hj. Hassan	F	Frances King Secretarial College, U.K.	Secretarial Certificate
22.	Dk. Mariam bte Pt. Ahmad	F	Frances King Secretarial College, U.K.	Secretarial Certificate
23.	Norhanah bte Hj. Abd. Rahim	F	Frances King Secretarial College, U.K.	Secretarial Certificate
24.	Siti Zaharah bte Md. Husain	F	Frances King Secretarial College, U.K.	Secretarial Certificate
25.	Dk. Siti Hadizah bte P.H. Apung	F	MARA Institute of Technology, Malaysia	Secretarial Certificate
26.	Shamsuah bte A. Latif	F	MARA Institute of Technology, Malaysia	Secretarial Certificate
27.	Misli bin Hj. Tush	M	MARA Institute of Technology, Malaysia	Diploma in Business Studies
28.	Mordiah bte Zakiah	F	MARA Institute of Technology, Malaysia	Diploma in Public Administration
29.	Abd. Rahim bin A. Latif	M	West London College, U.K.	Higher National Diploma in Business Studies.
30.	Abdullah bin Mudim Hj. Bakar	M	University of Leeds, U.K.	B.Sc. (Electrical Eng.)
31.	Mohd. Alimin b. Abd. Wahab	M	Wolverhampton Polytechnic, U.K.	B.A. (General)
32.	All Hashim bin Hj. Daud	M	North East London Polytechnic, U.K.	B.Sc. (General)
33.	Norsiah bte Hj. Daud	F	Thames Polytechnic, U.K.	B.Sc. (General)
34.	Julaili bin Abd. Kadir	M	Oxford Polytechnic, U.K.	B.Sc. (Economics) London
35.	Yacob bin Sunny	M	Bournemouth & Poole College of Art, U.K.	Dip. in Film Production
36.	Dk. Siti Mariam bte P.H. Metussin	F	Northern Polytechnic, London, U.K.	Dip. in Institutional Management
37.	Md. Zain bin Salleh	M	MARA Institute of Technology, Malaysia	Dip. in Planting Industry
38.	Ong Giti Ching	F	Oxford University, College of Education	B.Sc. (Sociology) and Certificate in Edu.
39.	Sunah bte Abd. Hamid	F	Hounslow Hospital, U.K.	S. E. N.
40.	Ibrahim bin Hj. Mohammed	M	Kingston & Chelsea Borough College, U.K.	Dip. in Architecture A.R.I.B.A.

SOCIAL DEVELOPMENT

The Science project

89. Preparations made in 1970 for the introduction of the Scottish Integrated Science Syllabus, amended where necessary to meet local needs into all Malay and English medium schools in the State were put into operation in 1972.

90. In 1972 this syllabus was taught by teachers who had followed the courses for this purpose in 1971.

The new Mathematics Project

91. Preliminary plans for the introduction of "Modern Mathematics" into all the primary and secondary schools in the State were formulated in 1971. It was decided to use in secondary schools the syllabuses of the Scottish Mathematics Group as adapted for Malaysian schools in English and Malay. A start will be made simultaneously in the primary and secondary schools in January, 1973. The work will advance by one class each year: it will reach Standard VI and Form 6 in 1978. An experienced senior officer was appointed in 1971 to take charge of the project. In 1972 he was assisted by Group Supervisors. The project used the "multiple feedback" method to train teachers in short courses. Worksheets were prepared for teachers and Group Supervisors visited schools regularly to advise and assist teachers where necessary.

The English Project

92. Thought was also given to the need to provide for the teaching of English as a foreign language in all Malay primary schools and to improve the teaching of English at all levels in all schools. English is taught by teachers from several Asian countries. Many have had no training in modern

SOCIAL DEVELOPMENT

methods of language teaching. The need to train all teachers throughout the school system, is recognised and was given high priority in 1972.

Statistical Tables for Annual Report, 1972

1. Schools, enrolment & staff:-
 - 1.1. Schools
 - 1.2. Pupils & student teachers
 - 1.3. Teachers
2. Analysis of School Statistics
3. Type of school, no. of schools, no of pupils & no. of teachers
4. Enrolment by sclasses:
 - 4.1. Arabic
 - 4.2. Malay
 - 4.3. Govt. English
 - 4.4. Mission
 - 4.5. Chinese
 - 4.6. Other
 - 4.7. Govt. Technical
 - 4.8. Govt. Teacher Training
5. Pupils & teachers per class
6. Analysis of pupils by race
7. Analysis of pupils & student teachers by age:-
 - 7.1. Arabic
 - 7.2. Malay Prim.
 - 7.6. Mission
 - 7.7. Chinese

SOCIAL DEVELOPMENT

- | | | | |
|------|---------------------|-------|------------------------|
| 7.3. | Malay Sec. | 7.8. | Other |
| 7.4. | Govt. English Prep. | 7.9. | Technical (Govt. only) |
| 7.5. | Govt. English Sec. | 7.10. | Teacher Training |
8. Hostel Boarders, pupils receiving subsistence allowance or free daily transport.
9. Teachers by qualification
10. Results of Examinations, 1972
11. Oversees students, month ending December 1972
12. Adult Education:-
- | | |
|------|----------------------------------|
| 12.1 | Enrolment & staff-Malay Medium |
| 12.2 | Enrolment & staff-English Medium |
| 12.3 | Adult Ed. Exam. results. |
13. Malay Language Teaching in non-Govt. Schools.

SOCIAL DEVELOPMENT

APPENDIT 1.1

STATE OF BRUNEI

EDUCATIONAL STATISTIC, 1972

1. SCHOOLS, ENROLMENT AND STAFF, APRIL, 1972

I.1 SCHOOLS, APRIL, 1972	GOVERNMENT				NON-GOVERNMENT				TOTAL			
	BOYS	GIRLS	COED	TOTAL	BOYS	GIRLS	COED	TOTAL	BOYS	GIRLS	COED	TOTAL
Kindergarten	-	-	-	-	1	1	12	14	1	1	12	14
Primary/Preparatory	-	1	117	118	1	1	14	16	1	2	131	134
Secondary	2	2	11	15	-	1	9	10	2	3	20	25
Vocational/Technical	2	-	-	2	-	-	-	-	2	-	-	2
Teacher Training	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	4	3	130	137	2	3	35	40	6	6	165	177

SOCIAL DEVELOPMENT

1.2 PUPILS & STUDENTS TEACHERS, MAY, 1972.

TYPE OF SCHOOL/COLLEGE	GOVERNMENT			NON-GOVERNMENT			TOTAL		
	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL
Kindergarten	-	-	-	639	617	1,256	639	617	1,256
Primary/Preparatory	11,940	11,204	23,144	4,145	3,363	7,508	16,085	14,567	30,652
Secondary	5,029	4,519	9,548	1,361	1,218	2,579	6,390	5,737	12,127
Technical/Vocational	146	-	146	-	-	-	146	-	146
Teacher Training	211	175	386	-	-	-	211	175	386
Higher Education	-	-	-	-	-	-	-	-	-
TOTAL	17,326	15,898	33,224	6,145	5,196	11,343	23,471	21,096	44,567

SOCIAL DEVELOPMENT

APPENDIX 1.3

1.3 TEACHERS, MAY, 1972

TYPE OF SCHOOL/COLLEGE	GOVERNMENT			NON-GOVERNMENT			TOTAL		
	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL
Kindergarten	-	-	-	-	40	40	-	40	40
Primary/Preparatory	781	442	1,223	52	203	255	833	645	1,478
Secondary	434	140	574	89	57	146	523	197	720
Technical/Vocational	28	-	28	-	-	-	28	-	28
Teacher Training	23	9	32	-	-	-	23	9	32
Higher Education	-	-	-	-	-	-	-	-	-
TOTAL	1,266	591	1,857	141	300	441	1,407	891	2,298

SOCIAL DEVELOPMENT

APPENDIX 2

II. ANALYSIS OF SCHOOL STATISTICS, MAY, 1972

TYPE OF SCHOOL/COLLEGE	NO. OF SCHOOL COLLEGE	NO. OF PUPILS		NO. OF TEACHERS	
		MALE	FEMALE	MALE	FEMALE
KINDERGARTEN	(a) Chinese	429	418	847	-
	(b) Mission	193	189	382	-
	(c) Other	17	10	27	2
	Total Kindergarten	639	617	1,256	-
PRIMARY/PREP:	(a) Government Arabic	27	39	66	4
	(b) Government English	3,113	3,159	6,272	132
	(c) Government Malay	8,800	8,808	16,808	318
	(d) Chinese	2,217	1,820	4,037	34
	(e) Mission	1,816	1,425	3,240	17
	(f) Other	113	118	231	1
	Total Primary/Preparatory	16,085	14,567	30,652	833
SECONDARY:	(a) Government Arabic	114	216	332	25
	(b) Government English	2,715	2,362	5,077	153
	(c) Government Malay	2,200	1,939	4,139	266
	(d) Chinese	324	235	559	36
	(e) Mission	1,037	963	2,020	53
	Total Secondary	6,390	5,737	12,127	523
VOCATIONAL/TECHNICAL:	(a) Government Technical Total	145	-	145	28
	Total Vocational/Technical	145	-	145	28
TEACHER TRAINING	(a) Govt. Religious Teachers Training	23	26	60	6
	(b) Govt. Teachers Training (general)	189	137	326	15
	Total Teachers Training	211	176	386	23
GRAND TOTAL		33,471	31,096	44,567	891
					2,298

SOCIAL DEVELOPMENT

APPENDIX 3

3. PUPILS & TEACHERS BY SCHOOL

SCHOOLS;	PUPILS			TEACHERS		
	B	G	T	B	G	T
I. GOVERNMENT MALAY SCHOOLS.						
(i) <u>Secondary</u>						
1. SMM Ahmad Tajuddin, K. Belait	123	114	237	22	3	25
2. M.M.P.S.B.S. Jalan Muara	721	453	1174	75	16	91
3. S.M.M. Muhammad Alam, Seria	144	148	292	22	2	24
4. S.M.M. Muda Hashim, Tutong	378	316	694	38	7	45
5. S.M.M. SMJA, Bandar Seri Begawan	737	844	1581	86	16	102
6. S.M.M. Sultan Hassan, Temburong	97	64	161	13	1	14
Total, Malay Secondary	2200	1939	4139	256	45	301
(ii) <u>Primary</u>						
Brunei I.						
1. S.M. Kg. Burong Pinggal Ayer	198	205	403	12	7	19
2. S.M. Kg. Setia	133	128	261	12	-	12
3. S.M. Kg. Sultan Lama	195	228	423	11	10	21
4. S.M. Lela Menchanai	507	188	695	22	8	30
5. S.M. Pintu Malim	79	65	144	6	3	9
6. S.M. Pesar Ulak	768	113	881	43	16	59
7. S.M. Raja Isteri Fatimah	-	620	620	-	40	40
8. S.M. Sungai Kebun	336	727	1063	31	14	45
Total, Malay Primary, Brunei I	2216	2274	4490	137	98	235
Brunei II						
1. S.M. Amar Pahlawan	176	150	326	8	10	18
2. S.M. Anak2 A.M.D.B.	67	64	131	4	5	9
3. S.M. Anggerek Desa	293	258	551	11	12	23
4. S.M. Aw. Hj. Mohd. Yusof	57	56	113	5	2	7
5. S.M. Bendahara Sakam, Bunut	174	136	310	4	11	15
6. S.M. Bengkurong	30	16	46	4	-	4
7. S.M. Dato Maha Wangea	148	107	255	7	6	13
8. S.M. Delima I	101	98	199	4	7	11
9. S.M. Gadong	145	130	275	11	6	17
10. S.M. Hj. Mohd. Salleh	107	109	216	9	6	15
11. S.M. Jerudong	61	61	122	6	1	7
12. S.M. Klarong	21	19	40	2	2	4
13. S.M. Kiulap	66	53	119	5	2	7
14. S.M. Mentiri	13	12	25	2	-	2
15. S.M. Mulaut	54	49	103	5	2	7
16. S.M. Orang Kaya Besar Imas	52	44	96	5	1	6
17. S.M. Orang Kaya Setia Bakit	113	110	223	7	5	12
18. S.M. Pantal Jiam, Beribi	16	16	32	3	-	3
19. S.M. Sengkurong	212	174	386	11	9	20
20. S.M. Serasa	45	30	75	4	1	5
21. S.M. Sultan Umar Ali Saifuddin	111	96	207	8	2	10
22. S.M. Tanah Jambu	41	37	78	6	-	6
Total, Malay Primary, Brunei II	2103	1825	3928	131	90	221

SOCIAL DEVELOPMENT

APPENDIX 3

SCHOOLS	PUPILS			TEACHERS		
	B	G	T	B	G	T
Brunei III						
1. S. M. Kg. Baru-Baru	27	28	55	3	1	4
2. S. M. Batu Marang	79	81	160	6	1	7
3. S. M. Berbunut	20	12	32	2	-	2
4. S. M. Dato Gandi	141	127	268	9	2	11
5. S. M. Junlongan	35	39	74	5	-	5
6. S. M. Kasai	42	34	76	6	-	6
7. S. M. Lumapas	125	77	202	8	4	12
8. S. M. Masin	28	32	60	4	1	5
9. S. M. Meununggol	30	21	51	4	-	4
10. S. M. Panchor Mural	44	37	81	5	1	6
11. S. M. Pengkalan Batu	29	29	58	2	2	4
12. S. M. Penglima Beruddin	75	48	123	5	2	7
13. S. M. Putak	28	19	47	3	-	3
14. S. M. Putat	23	28	51	4	-	4
15. S. M. Sultan Abdul Bebin	36	34	70	5	1	6
Total, Malay Primary, Brunei III	782	642	1404	71	15	86
Tutong I						
1. S. M. Bakiam	24	21	45	2	2	4
2. S. M. Betang Mitas	51	29	80	5	-	5
3. S. M. Biran	66	58	125	5	2	7
4. S. M. Bukit Panggal	29	23	52	3	2	5
5. S. M. Penanjong	71	80	151	5	4	9
6. S. M. Sinant	131	82	213	8	6	14
7. S. M. Kg. Menengah	35	25	60	4	-	4
8. S. M. Keriam	43	33	76	3	3	6
9. S. M. Kindang	102	67	169	7	4	11
10. S. M. Lamania	96	98	194	8	5	13
11. S. M. Muda Hashim	122	91	213	7	6	13
12. S. M. O.K.A.W.S.Dt-Raja, Kupang	61	65	126	6	2	8
Total, Malay Primary, Tutong I	833	671	1504	63	36	99
Tutong II						
1. S. M. Abdul Rashid	62	46	108	4	4	8
2. S. M. Belaban	29	11	40	3	-	3
3. S. M. Beontan	39	32	71	5	-	5
4. S. M. Bukit Udai	41	31	72	4	1	5
5. S. M. Danau	37	25	62	5	1	6
6. S. M. Dato Pemancha Saging	88	69	157	7	-	7
7. S. M. Kampong Bukit	53	36	89	6	-	6
8. S. M. Layang	65	43	108	5	1	6
9. S. M. Lubok Pulau	18	22	40	2	1	3
10. S. M. Panchong	35	26	61	4	-	4
11. S. M. Penasap	45	20	65	3	2	5
12. S. M. Pengiran Kesuma Negara	17	13	30	3	-	3
13. S. M. Pengiran Muda Mahkota	30	34	64	4	1	5
14. S. M. Rambai	51	55	106	6	-	6
15. S. M. Sengkurai	104	83	187	4	6	10
16. S. M. Sungai Damit, Pemadang	24	20	44	2	1	3
17. S. M. Supon	34	22	56	4	-	4
18. S. M. Tumpuan Telisai	46	46	92	6	1	7
Total, Malay Primary, Tutong II	818	634	1452	77	19	96

SOCIAL DEVELOPMENT

APPENDIX 3

SCHOOLS	PUPILS			TEACHERS		
	B	G	T	B	G	T
<u>Belait</u>						
1. S. M. Ahmad Tajuddin	486	461	947	23	21	44
2. S. M. Bukit Sawat	70	46	116	8	-	8
3. S. M. Kuala Belait	7	11	18	2	-	2
4. S. M. Labi	47	32	79	4	3	7
5. S. M. Lumut	67	63	130	6	1	7
6. S. M. Melilas	12	19	31	3	-	3
7. S. M. Merangking	34	37	71	3	1	4
8. S. M. Muhd. Alam, Seria	635	697	1332	40	22	62
9. S. M. Rampayah	26	32	58	4	1	5
10. S. M. Sukang	30	30	60	5	-	5
11. S. M. Sungai Liang	93	78	171	7	3	10
12. S. M. Sungai Teraban	41	44	85	6	-	6
Total, Malay Primary, Belait	1548	1550	3098	111	52	163
<u>Temburong</u>						
1. S. M. Amo	22	15	37	3	-	3
2. S. M. Belais	23	16	39	3	-	3
3. S. M. Bellingos	17	10	27	2	-	2
4. S. M. Biang Tengah	10	5	15	2	-	2
5. S. M. Bokok	43	41	84	5	1	6
6. S. M. Kinua	28	24	52	3	-	3
7. S. M. Labu Estate	29	20	49	4	-	4
8. S. M. Negalang	20	22	42	4	-	4
9. S. M. Piasau-Piasau	22	14	36	3	-	3
10. S. M. Puni	48	49	97	4	1	5
11. S. M. Selangan	39	31	70	4	-	4
12. S. M. Semabat	8	10	18	2	-	2
13. S. M. Senokoh	17	15	32	3	-	3
14. S. M. Sultan Hashim, Batu Apol	58	40	98	5	1	6
15. S. M. Sultan Hassan, Bangar	136	98	234	8	5	13
Total, Malay Primary, Temburong	520	410	930	55	8	63
TOTAL GOVERNMENT MALAY PRIMARY	8800	8006	16806	645	318	963
<u>II. GOVERNMENT ENGLISH SCHOOLS</u>						
<u>(i) SECONDARY</u>						
1. Anthony Abell College	428	323	751	25	13	38
2. Berakas English School	301	271	572	16	9	25
3. Sekolah Tinggi Perempuan Raja Isteri	-	989	989	3	42	45
4. SOASC, Senior Secondary College	511	340	851	36	5	41
5. SOASC, Junior Secondary College	1003	-	1003	44	1	45
6. Perdana Wazir English School	235	232	467	16	8	24
7. Tutong English School	237	207	444	13	9	22
Total, Govt. English Secondary	2715	2362	5077	153	87	240

SOCIAL DEVELOPMENT

APPENDIX 3

SCHOOLS	PUPILS			TEACHERS		
	B	G	T	B	G	T
(II) PREPARATORY						
1. A. A. C. Preparatory Section	326	348	674	11	15	26
2. B. P. S., BSB. Annex	1189	1072	2261	42	46	88
3. B. P. S., Amar Pahlawan Annex	122	105	227	7	4	11
4. B. P. S., Anggerek Desa Annex	154	162	316	6	8	14
5. B. P. S., Bangar Annex	122	107	229	5	4	9
6. B. P. S., Kilanas Annex	109	123	232	8	3	11
7. B. P. S., Lambak Annex	28	43	71	-	3	3
8. B. P. S., Muara Annex	139	154	293	7	4	11
9. B. P. S., Pengkalan Batu Annex	29	23	52	2	-	2
10. B. P. S., Sengkuring Annex	118	145	263	10	2	12
11. B. P. S., Sungai Hanching Annex	39	37	76	2	2	4
12. P. W. E. S., Preparatory Section	184	232	416	6	11	17
13. T. E. S., Preparatory Section	507	557	1064	24	18	42
14. B. P. S., Date Gandi	9	15	24	1	-	1
15. B. P. S. Gadong	38	36	74	1	2	3
Total, Govt. English Preparatory	3113	3159	6272	132	122	254
III. GOVERNMENT ARAB SCHOOL SECONDARY PREPARATORY						
1. S. M. Arab Hassanah Bolkiah (Sec.)	76	132	208	17	6	23
2. S. M. Arab Raja Isteri Anak Damit: Secondary	38	86	124	8	2	10
Preparatory	27	39	66	4	2	6
Total, Govt. Arabic Sec. & Prep.	141	257	398	29	10	39

SOCIAL DEVELOPMENT

APPENDIX 3

SCHOOLS	PUPILS			TEACHERS		
	B	G	T	B	G	T
III. MISSION ENGLISH SCHOOLS						
(i) SECONDARY						
1. St. Andrew's	354	126	279	9	5	14
2. St. Angela's	-	449	449	5	16	21
3. St. George's	131	106	239	8	6	14
4. St. James's	52	39	91	2	2	4
5. St. John's	89	102	191	4	2	6
6. St. Margaret's	197	157	354	9	8	17
7. St. Michael's	414	3	417	16	6	22
Total, Mission Secondary	1087	883	2020	53	45	88
(ii) PRIMARY						
1. St. Andrew's	411	277	688	8	14	22
2. St. Angela's	-	466	466	-	13	13
3. St. George's	273	228	601	1	14	15
4. St. James's	143	96	231	-	10	16
5. St. John's	280	211	491	2	16	20
6. St. Margaret's	274	163	439	2	13	15
7. St. Michael's	434	-	434	4	16	20
Total, Mission Primary	1815	1425	3240	17	86	115
(iii) KINDERGARTEN						
1. St. Andrew's	44	35	79	-	5	5
2. St. Angela's	-	47	47	-	2	2
3. St. George's	55	38	93	-	1	1
4. St. James's	14	8	22	-	3	3
5. St. John's	42	44	86	-	2	2
6. St. Margaret's	15	17	32	-	3	3
7. St. Michael's	23	-	23	-	1	1
Total, Mission Kindergarten	193	189	382	-	47	17
IV. CHINESE SCHOOLS						
(i) SECONDARY						
1. Chung Ching, Seria	190	118	306	12	5	17
2. Chung Hua, Bandar Seri Begawan	84	86	172	15	4	19
3. Chung Hua, Kuala Belait	50	29	79	9	3	12
Total, Chinese Secondary	324	235	559	36	12	48
(ii) PRIMARY						
1. Chung Ching, Seria	757	572	1329	13	32	45
2. Chung Hua, Bandar Seri Begawan	825	715	1540	8	37	45
3. Chung Hua, Kuala Belait	386	347	733	4	11	15
4. Chung Hua, Kudang	16	13	29	2	-	2
5. Chung Hua, Labi	62	41	103	3	2	5
6. Chung Hua, Tutong	72	45	117	1	4	5
7. Chung Lian, Sg. Liang	75	64	139	2	3	5
8. Pui Yuek, Bangar	24	23	47	1	2	3
Total, Chinese Primary	2217	1820	4037	34	91	125

SOCIAL DEVELOPMENT

APPENDIX 3

SCHOOLS	PUPILS			TEACHERS		
	B	G	T	B	G	T
(Iii) KINDERGARTEN						
1. Chung Ching, Seria	137	111	248	-	6	6
2. Chung Hwa, Bandar Seri Begawan	163	172	335	-	7	7
3. Chung Hwa, Kuala Belait	94	103	197	-	4	4
4. Chung Hwa, Labi	7	11	18	-	1	1
5. Chung Hwa, Tutong	15	11	26	-	1	1
6. Chung Lian, Sg. Liang	13	10	23	-	2	2
Total, Chinese Kindergarten	429	418	847	-	21	21
V. OTHER SCHOOLS:						
(i) PRIMARY						
1. Panaga Primary School Seria	113	118	231	1	14	15
(ii) KINDERGARTEN						
1. Panaga Kindergarten, Seria	17	10	27	-	2	2
VI. GOVERNMENT TEACHICAL SCHOOL						
1. Building Trade School, B.S.B.	86	-	86	16	-	16
2. Engineering Trade School, Kuala Belait	60	-	60	12	-	12
Total, Govt. Technical School	146	-	146	28	-	28
VII. GOVERNMENT TEACHERS TRAINING						
1. Maktab PSHB, Gadong	189	137	326	15	8	23
2. Maktab Perguruan Ugama	22	38	60	8	1	9
Total, Teachers Training	211	175	386	23	9	32

SOCIAL DEVELOPMENT

APPENDIX 3

PUPIL & TEACHERS BY SCHOOLS, TOTAL BY LEVEL

SCHOOLS	PUPILS			TEACHERS		
	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL
KINDERGARTEN :						
Mission	193	189	382	-	17	17
Chinese	429	418	847	-	21	21
Other	17	10	27	-	2	2
Total, Kindergarten	639	617	1256	-	40	40
PRIMARY/PREPARATORY:						
Govt. Arabic	27	39	66	4	2	6
Govt. English	3113	3159	6272	132	122	254
Govt. Malay	8800	8006	16806	645	318	963
Mission	1815	1425	3240	17	13	115
Chinese	2217	1820	4037	34	91	125
Other	113	118	231	1	14	15
Total, Primary/Preparatory	16085	14567	30652	833	645	1478
SECONDARY:						
Govt. Arabic	114	218	332	25	8	33
Govt. English	2715	2362	5077	153	87	240
Govt. Malay	2200	1939	4139	256	45	301
Mission	1037	983	2020	53	45	98
Chinese	324	235	559	36	12	48
Other	-	-	-	-	-	-
Total, Secondary	6390	5737	12127	523	197	720
TECHNICAL:						
Govt. Trade	146	-	146	28	-	28
Total, Technical	146	-	146	28	-	28
TEACHER TRAINING:						
Govt. General Teachers' Training	189	137	326	15	8	23
Govt. Religious Teachers' Training	22	38	60	8	1	9
Total Teachers' Training	211	175	386	23	9	32
GRAND TOTAL	23471	21096	44567	1407	891	2298

SOCIAL DEVELOPMENT

APPENDIX 4.1

ENROLMENT BY CLASSES, MAY, 1972 4.1 GOVERNMENT ARABIC SCHOOLS

SCHOOL LEVEL		NEW INTAKE				REPEATERS				TOTAL			
		CL	M	F	T	CL	M	F	T	CL	M	F	T
PREPARATORY LEVEL	PREPARATORY 1	1	8	-	8	-	-	-	-	1	8	-	8
	PREPARATORY 2	1	19	39	58	-	-	-	-	1	19	39	58
	TOTAL PREPARATORY	2	27	39	66	-	-	-	-	2	27	39	66
SECONDARY LEVEL	FORM 1	1	6	28	34	-	-	-	-	1	6	28	34
	FORM 2	3	32	58	90	-	-	-	-	3	32	58	90
	FORM 3	3	13	27	40	-	5	28	33	3	18	55	73
	FORM 4	4	24	48	72	-	-	-	-	4	24	48	72
	FORM 5	2	18	18	36	-	6	7	13	2	24	25	49
	FORM U6	1	10	4	14	-	10	4	14	1	10	4	14
TOTAL SECONDARY		14	103	183	286	-	11	35	46	14	114	218	332
TOTAL PREPARATORY & SECONDARY		16	130	222	352	-	11	35	46	16	141	257	398

SOCIAL DEVELOPMENT

APPENDIX 4.2

ENROLMENT BY CLASSES, MAY, 1972 4.2 GOVERNMENT MALAY SCHOOLS

SCHOOL LEVEL		NEW INTAKE				REPEATERS				TOTAL			
		CL	M	F	T	M	F	T		CL	M	F	T
<u>PRIMARY LEVEL</u>	STANDARD I	167	1647	1621	3268	-	-	-		167	1647	1621	3268
	STANDARD II	190	2221	1965	4186	-	-	-		190	2221	1965	4186
	STANDARD III	150	1497	1372	2869	-	-	-		150	1497	1372	2869
	STANDARD IV	168	1680	1655	3335	28	17	45		168	1708	1672	3380
	STANDARD V	106	845	664	1509	-	-	-		106	845	664	1509
	STANDARD VI	94	604	459	1063	278	253	531		94	882	712	1591
TOTAL, PRIMARY		875	8494	7736	16230	306	270	576		875	8800	8006	16806
<u>SECONDARY LEVEL</u>	FORM 1	28	390	320	710	-	-	-		28	390	320	710
	FORM 2	34	516	431	947	-	-	-		34	516	431	947
	FORM 3	56	389	419	808	251	389	640		56	640	808	1448
	FORM 4	15	245	185	430	-	-	-		15	245	185	430
	FORM 5	14	193	118	311	60	45	105		14	253	163	418
	FORM LOWER 6	4	85	23	108	-	-	-		4	85	23	108
FORM UPPER 6		3	51	3	54	20	6	26		3	71	9	80
TOTAL, SECONDARY		154	1869	1499	3368	331	440	771		154	2200	1939	4139
TOTAL, PRIMARY & SECONDARY		1029	10363	9235	19598	637	710	1347		1029	11000	9945	20945

SOCIAL DEVELOPMENT

APPENDIX 4.3

ENROLMENT BY CLASSES, MAY 1972

4.3 GOVERNMENT ENGLISH SCHOOLS

SCHOOL LEVEL		NEW INTAKE				REPEATERS			TOTAL			
		CL	M	F	T	M	F	T	CL	M	F	T
PREPARATORY LEVEL.	PREPARATORY I	64	1,000	1,026	2,026	-	-	-	64	1,000	1,026	2,026
	PREPARATORY II	61	994	1,003	1,997	-	-	-	61	994	1,003	1,997
	PREPARATORY III	68	824	815	1,639	295	315	610	68	1,119	1,130	2,249
	TOTAL	193	2,818	2,844	5,662	295	315	610	193	3,113	3,159	6,272
SECONDARY LEVEL	FORM 1	44	713	702	1,415	-	-	-	44	713	702	1,415
	FORM 2	40	674	585	1,259	-	-	-	40	674	585	1,259
	FORM 3	38	477	427	904	133	170	303	38	610	597	1,207
	FORM 4	20	328	279	607	-	-	-	20	328	279	607
	FORM 5	13	191	145	336	39	9	48	13	230	164	394
	FORM LOWER 6	4	105	38	143	-	-	-	4	105	38	143
	FORM UPPER 6	3	35	7	42	20	-	20	3	55	7	62
	TOTAL, SECONDARY	162	2,523	2,183	4,706	192	179	371	162	2,715	2,362	5,077
TOTAL, PREPARATORY & SECONDARY	355	5,341	5,027	10,368	487	494	981	355	5,828	5,521	11,349	

SOCIAL DEVELOPMENT

APPENDIX 4.2

ENROLMENT BY CLASSES, MAY, 1972 4.2 GOVERNMENT MALAY SCHOOLS

SCHOOL LEVEL		NEW INTAKE				REPEATERS			TOTAL				
		CL	M	F	T	M	F	T	CL	M	F	T	
PRIMARY LEVEL	STANDARD I	167	1647	1621	3268	-	-	-	-	167	1647	1621	3268
	STANDARD II	190	2221	1965	4186	-	-	-	-	190	2221	1965	4186
	STANDARD III	150	1497	1372	2869	-	-	-	-	150	1497	1372	2869
	STANDARD IV	168	1680	1655	3335	28	17	45	168	1708	1672	3380	
	STANDARD V	106	845	664	1509	-	-	-	106	845	664	1509	
	STANDARD VI	94	604	459	1063	278	253	531	94	882	712	1594	
	TOTAL, PRIMARY	875	8494	7736	16230	306	270	576	875	8800	8006	16806	
SECONDARY LEVEL	FORM 1	28	390	320	710	-	-	-	-	28	390	320	710
	FORM 2	34	516	431	947	-	-	-	-	34	516	431	947
	FORM 3	56	389	419	808	251	389	640	56	640	808	1448	
	FORM 4	15	245	185	430	-	-	-	15	245	185	430	
	FORM 5	14	193	118	311	60	45	105	14	253	163	416	
	FORM LOWER 6	4	85	23	108	-	-	-	4	85	23	108	
	FORM UPPER 6	3	51	3	54	20	6	26	3	71	9	80	
TOTAL, SECONDARY		154	1869	1499	3368	331	440	771	154	2200	1939	4139	
TOTAL, PRIMARY & SECONDARY		1029	10363	9235	19598	637	710	1347	1029	11000	9945	20945	

SOCIAL DEVELOPMENT

APPENDIX 4.3

ENROLMENT BY CLASSES, MAY 1972

4.3 GOVERNMENT ENGLISH SCHOOLS

SCHOOL LEVEL		NEW INTAKE				REPEATERS				TOTAL			
		CL	M	F	T	M	F	T	CL	M	F	T	
PREPARATORY LEVEL.	PREPARATORY I	64	1,000	1,026	2,026	-	-	-	64	1,000	1,026	2,026	
	PREPARATORY II	61	994	1,003	1,997	-	-	-	61	994	1,003	1,997	
	PREPARATORY III	68	824	815	1,639	295	315	610	68	1,119	1,130	2,249	
	TOTAL	193	2,818	2,844	5,662	295	315	610	193	3,113	3,159	6,272	
SECONDARY LEVEL	FORM 1	44	713	702	1,415	-	-	-	44	713	702	1,415	
	FORM 2	40	674	585	1,259	-	-	-	40	674	585	1,259	
	FORM 3	38	477	427	904	133	170	303	38	610	597	1,207	
	FORM 4	20	328	279	607	-	-	-	20	328	279	607	
	FORM 5	13	191	145	336	39	9	48	13	230	154	384	
	FORM LOWER 6	4	105	38	143	-	-	-	4	105	38	143	
	FORM UPPER 6	3	35	7	42	20	-	20	3	55	7	62	
	TOTAL, SECONDARY	162	2,523	2,183	4,706	192	179	371	162	2,715	2,362	5,077	
TOTAL, PREPARATORY & SECONDARY		355	5,341	5,027	10,368	487	494	981	355	5,828	5,521	11,349	

SOCIAL DEVELOPMENT

APPENDIX 4.4

ENROLMENT BY CLASSES, 1972

4.4 MISSION ENGLISH SCHOOL

SCHOOL LEVEL		NEW INTAKE				REPEATERS				TOTAL			
		CL	M	F	T	M	F	T	CL	M	F	T	
PRE-PRIMARY LEVEL PRIMARY LEVEL	KINDERGARTEN	11	174	177	351	19	12	31	11	193	189	382	
	STANDARD I	12	215	163	378	40	12	52	12	255	175	430	
	STANDARD II	13	288	194	422	30	16	46	13	288	210	468	
	STANDARD III	14	271	208	479	50	12	62	14	321	220	541	
	STANDARD IV	14	252	211	463	47	13	60	14	299	224	523	
	STANDARD V	14	233	210	443	55	19	74	14	288	229	517	
	STANDARD VI*	23	323	333	656	71	34	105	23	394	367	761	
TOTAL, PRIMARY		90	1522	1319	2841	293	106	399	90	1815	1425	3240	
SECONDARY LEVEL	FORM 1	14	226	217	443	34	31	65	14	260	248	508	
	FORM 2	13	205	225	430	20	7	27	13	235	232	457	
	FORM 3	13	208	186	394	26	24	50	13	234	210	444	
	FORM 4	9	169	154	323	10	5	15	9	179	159	338	
	FORM 5	8	113	130	243	2	1	3	8	115	131	246	
	FORM LOWER 6	1	16	2	18	-	-	-	1	16	2	18	
	FORM UPPER 6	1	8	1	9	-	-	-	1	8	1	9	
TOTAL, SECONDARY		59	945	915	1860	92	68	160	59	1037	983	2020	
TOTAL, KINDERGARTEN , PRIMARY & SECONDARY		160	2641	2411	5052	404	186	590	160	3044	2598	5642	

* Including transition or remove classes.

SOCIAL DEVELOPMENT

APPENDIX 4.5

ENROLMENT BY CLASSES, MAY, 1972 4.5 CHINESE SCHOOLS

SCHOOL LEVEL		NEW INTAKE				REPEATERS				TOTAL			
		CL	M	F	T	M	F	T	CL	M	F	T	
PRE-PRIMARY LEVEL	KINDERGARTEN	20	357	367	734	72	51	123	20	429	418	847	
	STANDARD I	22	318	305	623	113	46	159	22	431	351	782	
	STANDARD II	22	360	273	633	121	60	181	22	481	333	814	
	STANDARD III	21	327	310	637	86	40	126	21	413	350	763	
	STANDARD IV	21	329	298	627	90	44	134	21	419	342	761	
	STANDARD V	17	187	204	391	70	47	117	17	257	251	508	
	STANDARD VI	14	182	172	354	34	21	55	14	216	193	409	
TOTAL PRIMARY		117	1703	1562	3265	514	258	772	117	2217	1820	4037	
SECONDARY LEVEL	JUNIOR MIDDLE I	6	94	74	168	21	19	40	6	115	93	208	
	JUNIOR MIDDLE II	4	61	51	112	10	11	21	4	71	63	133	
	JUNIOR MIDDLE III	3	40	22	62	2	-	2	3	42	22	64	
	SENIOR MIDDLE I	2	41	30	72	-	-	-	2	41	30	71	
	SENIOR MIDDLE II	2	28	13	41	-	1	1	2	28	14	42	
	SENIOR MIDDLE III	2	27	14	41	-	-	-	2	27	14	41	
	TOTAL, SECONDARY	19	291	204	495	33	31	64	19	324	235	559	
TOTAL, KINDERGARTEN , PRIMARY & SECONDARY		136	2351	2133	4484	619	340	939	136	2970	2473	5443	

SOCIAL DEVELOPMENT

APPENDIX 4.6

ENROLMENT BY CLASSES, MAY, 1972 4.6 OTHER SCHOOL

SCHOOL LEVEL		NEW INTAKE				REPEATERS				TOTAL			
		CL	M	F	T	M	F	T		CL	M	F	T
PRE-PRIMARY LEVEL PRIMARY LEVEL	KINDERGARTEN	1	17	10	27	-	-	-		1	17	10	27
	STANDARD I *	4	39	40	79	-	-	-		4	39	40	79
	STANDARD II	2	15	19	34	-	-	-		2	15	19	34
	STANDARD III	2	25	16	41	-	-	-		2	25	16	41
	STANDARD IV	2	13	16	29	-	-	-		2	13	16	29
	STANDARD V	2	9	16	25	-	-	-		2	9	16	25
	STANDARD VI	2	12	11	23	-	-	-		2	12	11	23
TOTAL, PRIMARY		14	113	118	231	-	-	-		14	113	118	231
TOTAL, KINDERGARTEN & PRIMARY		15	130	128	258	-	-	-		15	130	128	258

SOCIAL DEVELOPMENT

APPENDIX 4.7 4.7 ENROLMENT BY CLASSES-GOVERNMENT TECHNICAL SCHOOLS.

YEAR	NEW INTAKE			REPEATERS			TOTAL		
	CL	M	F	T	M	F	CL	M	T
FIRST YEAR	5	98	-	98	-	-	5	98	98
SECOND YEAR	2	48	-	48	-	-	2	48	48
THIRD YEAR	-	-	-	-	-	-	-	-	-
TOTAL	7	146	-	146	-	-	7	146	146

APPENDIX 4.8 4.8 ENROLMENT BY CLASSES-GOVERNMENT TEACHERS' TRAINING (General & Religious)

YEAR	NEW INTAKE			REPEATERS			TOTAL		
	CL	M	F	T	M	F	CL	M	T
FIRST YEAR	8	89	83	172	-	-	8	89	83
SECOND YEAR	4	49	49	96	-	-	4	49	47
THIRD YEAR	6	73	45	118	-	-	6	73	45
TOTAL	18	211	175	386	-	-	18	211	175

SOCIAL DEVELOPMENT

APPENDIX 5

PUPILS AND TEACHERS PER CLASS, MAY, 1972

TYPE OF SCHOOL/COLLEGE	TOTAL NO. OF PUPILS	TOTAL NO. OF TEACHERS	TOTAL NO. OF CLASSES	AVERAGE NO. OF PUPILS PER CLASS	AVERAGE NO. OF TEACHERS PER CLASS
<u>KINDERGARTEN</u>					
Mission	382	17	11	34.7	1.5
Chinese	347	17	20	42.3	0.9
Other	27	2	1	27	2
<u>PRIMARY/PREPARATORY</u>					
Govt. Arabic	66	6	2	33	3
Govt. English	6,272	254	193	32.5	1.3
Govt. Malay	16,805	963	875	19	1.1
Mission	3,240	115	90	36	1.3
Chinese	4,037	125	117	34.5	1.1
Other	231	15	14	16.5	1.1
<u>SECONDARY</u>					
Govt. Arabic	332	33	14	23.7	2.4
Govt. English	5,077	340	162	31.3	1.5
Govt. Malay	4,139	301	154	27	1.9
Mission	2,020	96	59	34.1	1.7
Chinese	559	45	19	29.4	2.5
<u>TECHNICAL</u>					
Govt. Trade	146	28	7	20.8	4
<u>TEACHER TRAINING</u>					
Govt. General Teachers' Training	326	23	15	21.7	1.5
Govt. Religious Teachers' Training	60	9	3	20	3

SOCIAL DEVELOPMENT

APPENDIX 6

ANALYSIS OF PUPILS BY RACE

SCHOOL/COLLEGE:	MALAYS		INDIGENOUS RACES		CHINESE		INDIANS		EUROPEANS		OTHER RACES		TOTAL			
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	T	T
GOVERNMENT																
Kindergarten	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Primary/Preparatory	11,251	10,618	364	231	303	330	4	8	2	-	16	17	11,940	11,204	23,144	23,144
Secondary	4,519	4,062	125	58	357	371	18	14	-	2	10	12	5,029	4,519	9,548	9,548
Technical/Vocational	140	-	-	-	6	-	-	-	-	-	-	-	146	-	146	146
Teacher Training	204	127	1	-	6	48	-	-	-	-	-	-	211	175	386	386
Higher Education	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total, Government	16,114	14,807	490	289	672	749	22	22	2	2	26	29	17,326	15,898	33,224	33,224
NON-GOVERNMENT																
Kindergarten	100	86	12	2	470	472	14	15	20	10	23	32	639	617	1,256	1,256
Primary	665	441	144	113	3,075	2,555	97	105	116	118	48	31	4,145	3,363	7,508	7,508
Secondary	132	124	216	125	918	868	39	37	4	1	50	63	1,361	1,218	2,579	2,579
Technical/Vocational	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Teacher Training	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Higher Education	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total, Non-Government	897	651	374	240	4,463	3,895	150	157	140	129	121	126	6,145	5,196	11,343	11,343
GRAND TOTAL	17,011	15,458	864	529	5,135	4,644	172	179	142	131	147	155	23,471	21,096	44,707	44,707

SOCIAL DEVELOPMENT

APPENDIX 7.1

ANALYSIS OF PUPILS BY AGE, MAY, 1972 7.1 GOVERNMENT ARABIC SCHOOLS

AGE (years)	PREP I		PREP I		TOTAL		FORM I		FORM 2		FORM 3		FORM 4		FORM 5		FORM 6		TOTAL	
	NEW		NEW		NEW		NEW		NEW		NEW		NEW		NEW		NEW		NEW	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Under 5																				
5																				
6																				
7																				
8																				
9																				
10	2	-	-	2	-	-	1	3	4		2	2								1
11	5	-	6	22	11	22	3	10	3											1
12			13	17	14	17	3	17	10	25	4	3								6
13																				14
14																				14
15																				7
16																				26
17																				10
18																				29
19																				20
20																				33
21 & over																				31
TOTAL	8	-	19	39	27	39	6	23	53	13	27	5	28	24	18	16	7	10	4	114
																				218

SOCIAL DEVELOPMENT

APPENDIX 7.2

ANALYSIS OF PUPILS BY AGE, MAY, 1972 7.2-GOVERNMENT MALAY PRIMARY SCHOOLS.

AGE IN YEARS	STD. I			STD. II			STD. III			STD. IV			STD. V			STD. VI			TOTAL MALAY PRIMARY			TOTAL	
	NEW INTAKE			NEW INTAKE			NEW INTAKE			NEW INTAKE			NEW INTAKE			NEW INTAKE							
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T		
Under 5	9	8																				18	
5	721	753	12	9	1	1														9	794	763	1497
6	646	630	709	570	6	7														1261	1307	2568	
7	196	152	891	900	316	217														1315	1276	2791	
8	43	49	393	367	637	572														1235	1343	2569	
9	20	15	67	72	361	366	659	671												1245	1345	1	
10	7	9	33	36	126	133	476	480	5	3	221	174	19	16						892	938	6	
11	2	5			40	41	166	169	12	4	303	183	78	61	6					19	662	18	
12	2		15		13	14	61	70	3	2	148	114	160	117	81	47				379	315	64	
13							34	23	6		64	80	136	119	73	76				273	221	76	
14							9	24		1	25	21	123	97	72	64				174	115	34	
15							1	5	6		9	6	40	41	44	39				81	48	55	
16											7	2	21	15	20	15				20	15	60	
17											2										17	20	
18																						8	
19																						1	
20																						4	
21 & over																							
TOTAL	6447	1621	2221	1966	1497	1372	1690	1655	29	17	545	604	604	459	278	283	9494	266	270	16896	7796	266	16896

SOCIAL DEVELOPMENT

APPENDIX 7.3

ANALYSIS OF PUPILS BY AGE, MAY, 1972

7.3 - GOVERNMENT MALAY, SECONDARY:

[illegible]

SOCIAL DEVELOPMENT

APPENDIX 7.4

ANALYSIS OF PUPILS BY AGE, MAY, 1972 7.4 - GOVERNMENT ENGLISH PREPARATORY.

AGE (YEARS)	PREPARATORY 1				PREPARATORY 2				PREPARATORY 3				TOTAL GOVT. ENGLISH PREPARATORY					
	NEW INTAKE		NEW INTAKE		NEW INTAKE		NEW INTAKE		NEW INTAKE		NEW INTAKE		NEW INTAKE		REPEATERS		TOTAL	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	T	
Under 5																		
5																		
6																		
7	1	1																2
8	2	1																3
9	88	80	2	1														171
10	319	343	47	43	8	15												775
11	389	407	268	281	33	59												1404
12	174	183	377	368	167	180												1404
13	27	32	262	297	312	305												1440
14	-	-	39	42	262	236												1335
15			2	1	40	28												107
16					2	2												114
17																		33
18																		2
19																		1
20																		2
21 & over																		3
TOTAL	1000	1026	994	1003	834	815	295	315	2816	2844	295	315	2816	2844	295	315	6372	

SOCIAL DEVELOPMENT

APPENDIX 7.5

ANALYSIS OF PUPILS BY AGE, MAY, 1972 7.5. GOVERNMENT ENGLISH SECONDARY

AGE (YEARS)	FORM 1			FORM 2			FORM 3			FORM 4			FORM 5			FORM LOWER 6			FORM UPPER 6			TOTAL GOVT. ENGLISH SEC.		
	NEW INTAKE		REPEATERS	NEW INTAKE		REPEATERS	NEW INTAKE		REPEATERS	NEW INTAKE		REPEATERS	NEW INTAKE		REPEATERS	NEW INTAKE		REPEATERS	NEW INTAKE		REPEATERS	NEW INTAKE		TOTAL
	M	F		M	F		M	F		M	F		M	F		M	F		M	F		M	F	
Under																								
5																								
6																								
7																								
8																								
9																								
10																								
11	2	5																				2	5	7
12	16	36																				18	38	54
13	113	147																				125	185	310
14	198	207																				280	313	592
15	187	165																				384	414	800
16	148	115																				531	472	1021
17	52	27																				502	372	833
18																						322	323	645
19																						176	110	286
20																						108	60	169
21 & over																						80	14	131
TOTAL	713	702		874	585	437	133	170	328	578	191	145	39	9	105	33	35	7	20	-	323	213	193	5077

SOCIAL DEVELOPMENT

APPENDIX 7.6

ANALYSIS OF PUPILS BY AGE, APRIL 1972 (Continued)

7.6 MISSION KINDERGARTEN PRIMARY STD. 1-V

AGE (YEARS)	KINDERGARTEN				STANDARD I				STANDARD II				STANDARD III				STANDARD IV				STANDARD V				
	NEW		REPEATERS		NEW		REPEATERS		NEW		REPEATERS		NEW		REPEATERS		NEW		REPEATERS		NEW		REPEATERS		
	INTAKE		INTAKE		INTAKE		INTAKE		NEW		REPEATERS		NEW		REPEATERS		NEW		REPEATERS		NEW		REPEATERS		
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
Under	57	51	11	7	-	3	-	3	3	2	2	2	4	6	-	1	2	2	18	16	2	18	16	3	1
5	83	65	6	2	43	30	1	-	36	39	6	4	26	27	4	3	16	16	7	60	60	7	2	21	47
6	31	48	1	2	89	72	12	2	89	83	6	4	40	44	15	7	40	40	8	3	35	31	6	2	
7	2	10	1	1	54	45	17	7	54	40	12	10	69	84	4	-	28	35	11	2	38	35	12	7	
8	1	2	-	-	18	7	8	3	44	40	12	10	55	44	15	-	35	23	8	3	35	31	6	2	
9	-	1	-	-	7	4	2	-	27	19	5	-	40	25	13	2	47	40	8	1	28	29	13	3	
10	-	-	-	-	2	2	-	-	14	5	5	-	40	9	6	-	35	23	8	3	35	31	6	2	
11	-	-	-	-	-	-	-	-	5	4	4	-	18	8	8	-	23	9	4	1	27	6	12	1	
12	-	-	-	-	-	-	-	-	3	2	-	-	11	5	3	1	4	2	1	-	9	2	1	-	
13	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
21 & Over	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
TOTAL	174	177	19	12	215	163	40	13	238	194	30	16	271	200	90	12	263	211	47	13	243	216	86	19	

SOCIAL DEVELOPMENT

APPENDIX 7.6

ANALYSIS OF PUPILS BY AGE, MAY, 1972 (Continued) 7.6 MISSION, PRIMARY & SECONDARY FORM 1-4

	STANDARD VI				TOTAL STD. I - VI				FORM I				FORM 2				FORM 3				FORM 4				
	NEW		REPEATERS		NEW		REPEATERS		NEW		REPEATERS		NEW		REPEATERS		NEW		REPEATERS		NEW		REPEATERS		
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
Under 5																									
5																									
6																									
7																									
8																									
9																									
10	16	11																							
11	39	52																							
12	55	58																							
13	47	75																							
14	83	70																							
15	40	41																							
16	32	15																							
17	17	5																							
18	9	6																							
19	4																								
20	1																								
21 & over																									
TOTAL	323	333	71	34	1632	1319	293	106	366	217	34	31	205	225	20	7	208	186	26	24	169	154	10	5	

SOCIAL DEVELOPMENT

APPENDIX 7.6

ANALYSIS OF PUPILS BY AGE, MAY, 1972 (Continued)

7.6 MISSION SECONDARY

AGE	FORM 5				FORM LOWER 6				FORM UPPER 6				TOTAL FORM 1 - US			
	NEW INTAKE		REPEATERS		NEW INTAKE		REPEATERS		NEW INTAKE		REPEATERS		NEW INTAKE		REPEATERS	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Under	5															
5																
6																
7																
8																
9																
10																
11																
12																
13																
14	1															
15	8	2														
16	9	14	1		1											
17	17	28	-		3											
18	28	18	-		6	2										
19	21	35	1		4											
20	18	17	-		2											
21 & over	11	16	-		-											
TOTAL	113	130	2	1	16	2			8	1			945	915	92	68

SOCIAL DEVELOPMENT

APPENDIX 7.7

ANALYSIS OF PUPILS BY AGE, MAY, 1972

7.7 CHINESE SCHOOLS, KINDERGARTEN & PRIMARY 1-5

AGE (years)	KINDERGARTEN				PRIMARY 1				PRIMARY 2				PRIMARY 3				PRIMARY 4				PRIMARY 5			
	NEW INTAKE		REPEATERS		NEW INTAKE		REPEATERS		NEW INTAKE		REPEATERS		NEW INTAKE		REPEATERS		NEW INTAKE		REPEATERS		NEW INTAKE		REPEATERS	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Under 5	57	51	11	7																				
5	83	65	6	2	11	16	1																	
6	31	48	1	2	123	128	17	12	14	16	4													
7	2	10	1	1	137	118	22	15	106	89	12	5	6	13	8									
8	1	2	-	-	44	30	40	11	121	86	10	72	87	9	3									
9	-	1	-	-	11	8	16	2	68	64	22	26	100	82	14	13								
10					1	3	4	4	28	19	23	15	69	63	26	13								
11																								
12					1	1	1	1	9	4	7	3	48	37	17	4								
13					1	1	1	1	3	4			13	19	13	8								
14													13	6	4									
15										1	1													
16																								
17																								
18																								
19																								
20																								
21 & over																								
TOTAL	174	177	19	12	218	206	113	48	260	273	151	60	287	210	28	40	283	200	90	44	127	204	70	47

SOCIAL DEVELOPMENT

APPENDIX 7.7

ANALYSIS OF PUPILS BY AGE, MAY, 1972-73 (Continued)

7.7 CHINESE, PRIMARY, JUNIOR MIDDLE 1-3

AGE (Years)	PRIMARY 6				TOTAL PRIM 1-6				JUNIOR MIDDLE 1				JUNIOR MIDDLE 2				JUNIOR MIDDLE 3				TOTAL JUNIOR MIDDLE			
	NEW INTAKE		REPEATERS		NEW INTAKE		REPEATERS		NEW INTAKE		REPEATERS		NEW INTAKE		REPEATERS		NEW INTAKE		REPEATERS		NEW INTAKE		REPEATERS	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Under 5																								
5					11	16	1																	
6					137	144	21	12																
7					240	220	49	20																
8					250	223	77	24																
9					237	260	62	44																
10	4	2			252	226	72	40																
11					224	207	66	24	2	4														
12	51	65	2	2	168	157	56	29	9	20	1	2	3	1										
13	56	44	7	9	106	73	38	36	31	24	3	5	9	11	1									
14	29	20	7	5	51	27	33	16	27	18	4	6	27	16	4	4								
15	9	3	12	5	14	8	28	11	14	5	7	4	15	10	3	3	13	8	1					
16	6	1	4		12	1	7	2	10	3	3	2	4	9	1	2	7	4	1					
17	1		2		1		4		1		3		2	4		2	10							
18																	1	2						
19																								
20																								
21 & over																								
TOTAL	192	172	34	21	1703	1562	514	256	94	74	21	19	61	51	10	11	40	22	2		186	147	33	30

SOCIAL DEVELOPMENT

APPENDIX 7.7

ANALYSIS OF PUPILS BY AGE, MAY, 1972. (Continued)

7.7 CHINESE SENIOR MIDDLE 1-3. TOTAL SECONDARY

	SENIOR MIDDLE 1				SENIOR MIDDLE 2				SENIOR MIDDLE 3				TOTAL SENIOR MIDDLE 1-3				TOTAL SECONDARY (J.M.1-S.M.3)			
	NEW INTAKE		REPEATERS		NEW INTAKE		REPEATERS		NEW INTAKE		REPEATERS		NEW INTAKE		REPEATERS		NEW INTAKE		REPEATERS	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Under 5																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15	6	12	-	-																
16	13	8	-	-																
17	11	8	-	-																
18	6	1	-	-																
19	5	-	-	-																
20	-	1	-	-																
21 & over																				
TOTAL	41	30	-	-	28	13	-	1	27	14	-	-	96	57	-	1	291	204	33	31

SOCIAL DEVELOPMENT

APPENDIX 7.8

ANALYSIS OF PUPILS BY AGE, MAY, 1972¹

7.8 OTHER SCHOOL KINDERGARTEN & PRIMARY 1-6

	KINDERGARTEN			PRIMARY 1*			PRIMARY 2			PRIMARY 3			PRIMARY 4			PRIMARY 5			PRIMARY 6			TOTAL PRIMARY		
	NEW INTAKE			NEW INTAKE			NEW INTAKE			NEW INTAKE			NEW INTAKE			NEW INTAKE			NEW INTAKE			NEW INTAKE		
	M	F		M	F		M	F		M	F		M	F		M	F		M	F		M	F	
Under	5	15	9	17	13																	17	13	
5	2	1		14	22																	14	22	
6				8	5																	20	20	
7							12	15														22	15	
8							3	3														11	16	
9							1	1					7	11								12	18	
10							-	-					4	5								12	18	
11													2	-								6	8	
12																						6	6	
13																								
14																								
15																								
16																								
17																								
18																								
19																								
20																								
21 & over																								
TOTAL	17	10		39	40		15	19		25	16		13	16		9	16		12	11		113	118	

* Including entrance class.

SOCIAL DEVELOPMENT

APPENDIX 7.9

ANALYSIS OF PUPILS BY AGE, MAY, 1972

7.9 TECHNICAL SCHOOL *

AGE (in years)	FIRST YEAR			SECOND YEAR			TOTAL		
	M	F	T	M	F	T	M	F	T
Under 10									
11									
12									
13									
14									
15									
16									
17	7	-	7				7	-	7
18	3	-	3	1	-	1	4	-	4
19	21	-	21	4	-	4	25	-	25
20	15	-	15	16	-	16	31	-	31
21	22	-	22	13	-	13	35	-	35
22	14	-	14	8	-	8	22	-	22
23	5	-	5	2	-	2	7	-	7
24	8	-	8	2	-	2	10	-	10
25 - 34	3	-	3	2	-	2	5	-	5
35	-	-	-	-	-	-	-	-	-
TOTAL	98	-	98	48	-	48	146	-	146

* Government Trade Schools only.

SOCIAL DEVELOPMENT

APPENDIX 7.10

7.10 ANALYSIS OF STUDENT-TEACHERS BY AGE, 1972

GENERAL TEACHERS' TRAINING & RELIGIOUS TEACHERS' TRAINING

	FIRST YEAR				SECOND YEAR				THIRD YEAR				YEAR (General only)				TOTAL			
	GENERAL		RELIGIOUS		TOTAL		GENERAL ONLY		U.C.E.		L.C.E.		TOTAL		TOTAL		TOTAL		TOTAL	
	GCE students		LCE Students				O.C.E. Students		Students		Students									
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Under 10																				
10																				
11																				
12																				
13																				
14																				
15																				
16																				
17																				
18																				
19																				
20																				
21																				
22																				
23																				
24																				
25 - 34																				
35 & over																				
TOTAL	67	45	22	38	89	83	179	60	47	96	88	34	11	73	45	116	211	176	388	388

APPENDIX 8

HOSTEL BOARDERS & PUPILS RECEIVING SUBSISTENCE ALLOWANCE OF FREE DAILY TRANSPORT

APRIL, 1972 (Government Schools only)

TYPE OF SCHOOL/COLLEGE	HOSTEL BOARDERS			PUPILS RECEIVING SUBSISTENCE ALLOWANCE			PUPILS RECEIVING FREE DAILY TRANSPORT					
							BUSES					
	M	F	T	M	F	T	M	F	T	M	F	T
Arabic : Preparatory	25	38	63	-	1	-	-	-	-	-	-	-
Secondary	114	215	329	-	-	2	-	-	-	-	-	-
English : Preparatory	233	246	479	121	93	214	534	621	1155	345	260	605
Secondary	402	198	1530	87	32	119	593	627	1220	-	17	17
Malay : Primary	4	3	7	26	20	46	7	7	14	21	168	192
Secondary	695	402	1097	65	107	172	738	696	1436	-	-	-
Technical : Trade Schools	146	-	146	-	-	-	-	-	-	-	-	-
Teachers' Training: General	189	137	326	-	-	-	-	-	-	-	-	-
Religious	22	38	60	-	-	-	-	-	-	-	-	-
TOTAL	1830	1277	4087	300	253	553	1872	1963	3825	366	445	814

SOCIAL DEVELOPMENT

APPENDIX 9

TEACHERS BY QUALIFICATION, MAY, 1972

TYPE OF SCHOOL/COLLEGE	HONOURS GRADUATE				PASS GRADUATE				NON-GRADUATE A - LEVEL				NON-GRADUATE 'O' LEVEL OR CHINESE SENIOR MIDDLE			
	TRAINED		UNTRAINED		TRAINED		UNTRAINED		TRAINED		UNTRAINED		TRAINED		UNTRAINED	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
KINDERGARTEN : Mission Chinese Other Total Kindergarten	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	7
PRIMARY/PREPARATORY: Govt. Arabic Govt. English Govt. Malay Mission Chinese Other Total, Primary/ Preparatory	1	1	-	-	2	13	3	2	2	11	5	8	96	60	40	123
SECONDARY : Govt. Arabic Govt. English Govt. Malay Chinese Mission Total, Secondary	20	4	10	5	34	13	11	8	11	5	-	-	16	4	-	-
TECHNICAL : Govt. Trade Total Technical	4	2	-	-	1	1	-	-	7	-	1	-	59	45	3	-
TEACHER TRAINING : General Teachers' Trg Religious Teachers' Trg Total Teacher Training	2	1	-	-	5	1	-	-	-	-	-	-	7	6	-	-
GRAND TOTAL	33	9	13	9	78	40	44	25	21	23	17	17	351	150	54	143

SOCIAL DEVELOPMENT

APPENDIX 9

TEACHERS BY QUALIFICATION, MAY, 1972 (Cont'd)

TYPE OF SCHOOL/COLLEGE	NON-GRADUATE BELOW 'O' L. OR CHINESE SENIOR MIDDLE			TECHNICAL INSTRUCTORS			TOTAL		
	UNTRAINED			TRAIN-ED			UNTRAINED		
	M	F	T	M	F	T	M	F	T
KINDERGARTEN : Mission Chinese Other Total Kindergarten	-	-	-	-	-	-	-	-	-
	-	-	7	-	-	2	-	18	17
	-	-	13	-	-	5	-	16	21
	-	-	-	-	-	2	-	2	2
	-	-	20	-	-	9	-	31	40
PRIMARY/PREPARATORY : Govt. Arabic Govt. English Govt. Malay Mission Chinese Other Total, Primary/Preparatory	-	2	-	-	-	4	-	-	4
	66	45	2	-	-	116	16	21	132
	597	296	8	-	-	635	10	14	645
	4	3	1	-	-	6	11	87	98
	1	1	7	-	-	7	3	27	34
	-	-	-	-	-	1	14	-	14
	668	350	16	-	-	769	64	210	833
SECONDARY : Govt. Arabic Govt. English Govt. Malay Mission Chinese Total, Secondary	3	2	-	-	-	25	-	-	25
	5	7	-	-	-	129	74	24	153
	78	16	-	-	-	255	45	1	296
	-	1	-	-	-	20	14	33	53
	-	-	-	-	-	14	6	22	38
	86	28	1	-	-	443	147	80	533
TECHNICAL : Govt. Trade Total, Technical	-	-	-	8	17	10	-	18	28
	-	-	-	8	17	10	-	18	28
TEACHER TRAINING : General Teacher Trg. Religious Teachers Total, Teacher Training	1	-	-	-	-	15	8	-	15
	2	-	1	-	-	6	1	2	8
	3	-	1	-	-	21	9	2	23
GRAND TOTAL	767	378	17	6	17	1343	600	164	291
								1407	881
									2296

SOCIAL DEVELOPMENT

APPENDIX 10.1

MALAYSIAN L. C. E. 1972 (MALAY MEDIUM)

CENTRE	GRADE A	GRADE B	GRADE C	PASSES FULL CERTIFICATE	PASSES IN AT LEAST ONE SUBJECT	FAILURES	TOTAL CANDIDATES EXAMINED
S.M. SMJA, Bandar Seri Begawan	26	26	26	76	611	66	744
NMPBS, Jalan Mera	26	5	4	26	22	-	57
SM Arab Hassanul Bolkiah, & KAD, B.S.B.	15	1	9	26	63	-	88
S.M.M. Muhsin Hashim, Tutong	16	5	6	27	269	9	296
S.M.M. Muhammed Alam, Seria	5	-	1	6	121	1	126
S.M.M. Ahmed Tajuddin, K. Belait	16	6	4	26	99	4	125
S.M.M. Sultan Hassan, Temburong	11	3	2	16	61	-	67
Adult Class, Sultan Hassan, Temburong	5	3	3	11	61	-	26
Adult Class, S.M.M. SMJA, B.S.B.	19	6	11	27	64	3	94
TOTAL	124	51	66	263	1,213	72	1,026

SOCIAL DEVELOPMENT

APPENDIX 10.2

10.2 MALAYSIA L. C. E. 1972 (ENGLISH MEDIUM)

SCHOOL/COLLEGE	GRADE A	GRADE B	GRADE C	PASSES FULL CERTIFICATE	PASSES IN AT LEAST ONE SUB.	FAILURES	TOTAL CANDIDATES EXAMINED
S.O.A.S.C. B.S.B.	68	10	7	85	215	-	300
S.T.P.R.I. B.S.B.	93	3	7	103	234	-	337
B.E.S., Berahas	20	-	3	23	107	1	131
S.B.E.S., Tulang	23	1	7	31	70	-	101
A.A.C., Seria	30	-	3	33	132	-	165
P.W.E.S., K. Belait	43	2	4	49	79	-	128
St. Andrew's School, B.S.B.	15	1	2	18	54	7	79
St. George's School, B.S.B.	10	2	1	13	27	-	40
St. Margaret's School, Seria	14	1	2	17	59	-	76
St. Michael's School, Seria	26	2	2	42	26	6	82
St. Angela's School, Seria	47	2	4	53	24	-	77
St. John's School, K. Belait	26	3	3	40	11	2	53
St. James' School, K. Belait	7	-	1	8	20	1	29
Adult Class, A.A.C., Seria	-	-	3	2	6	-	7
Adult Class, P.W.E.S., K. Belait	-	-	-	-	18	-	18
Adult Class, S.O.A.S., B.S.B.	4	1	3	7	61	1	69
TOTAL	447	23	49	534	1,161	17	1,692

APPENDIX 10.3

10.3 MALAYSIA CERTIFICATE OF EDUCATION, 1972 (MALAY MEDIUM)

SCHOOL/COLLEGE	GRADE I	GRADE II	GRADE III	TOTAL FULL MCE PASSES	PASSES IN GCE	FAILURES	TOTAL CANDIDATES EXAMINED
M.M.P.S.B.S. Jalan Muara	-	1	47	48	119	244	411
S.M.A. Hassanah Bolkiah & RIAD, B.S.B.	1	2	17	20	10	19	49
Private Candidate, B.S.B.	-	-	34	34	90	166	290
Private Candidate, Seria	-	-	21	21	29	21	71
TOTAL	1	3	119	123	248	450	821

SOCIAL DEVELOPMENT

APPENDIX 10.4

10.4 MALAYSIAN CERTIFICATE OF EDUCATION, 1972 (ENGLISH MEDIUM)

SCHOOL/COLLEGE	GRADE I	GRADE II	GRADE III	TOTAL FULL MCE PASSES	PASSES IN OCE	FAILURES	TOTAL CANDIDATES EXAMINED
SOASC; Bender Seri Begawan	13	22	96	140	75	26	251
St. Andrew's School, B.S.B.	1	1	6	8	22	16	46
St. George's School, B.S.B.	2	-	-	2	34	3	29
Anthony Abell College, Seri	2	7	17	26	26	14	78
Pardana Wasir English School, K. Belait	-	-	4	4	26	7	29
St. Margaret's School, K. Belait	-	1	-	1	26	18	55
St. Michael's School, Seria	1	2	2	5	20	10	45
St. Angela's School, Seria	5	6	7	18	42	4	64
Private Candidates, B.S.B.	-	-	6	6	27	58	91
Private Candidates, Seria	-	1	8	9	8	18	26
TOTAL	24	49	121	294	266	164	607

SOCIAL DEVELOPMENT

APPENDIX 10.5

10.5 HIGHER SCHOOL CERTIFICATE EXAMINATION/G. C. E. 'A' LEVEL (English & Malay Medium) 1972

SCHOOL/COLLEGE	FULL H. S. C. PASSES	PASSES IN G. C. E.	FAILURES	TOTAL CANDIDATES EXAMINED
Sultan Omar Ali Salfuddin College, B.S.B.	8	40	4	52
Maktab Melayu Paduka Seri Begawan Sultan, J. Muara	4	53	4	61
St. Michael's School, Seria	1	10	1	12
Private Candidates, B.S.B. (English Medium)	2	19	1	22
Private Candidates, B.S.B. (Malay Medium)	2	48	3	53
Private Candidates, Seria, (Malay Medium)	-	8	1	9
TOTAL	17	178	14	209

SOCIAL DEVELOPMENT

APPENDIX 10.6

CHINESE MIDDLE SCHOOLS COMMON EXAMINATION-1972

10.6 CHINESE JUNIOR MIDDLE EXAMINATIONS, 1972

SCHOOL	PASSES			PROVISIONAL PASSES			FAILURES			TOTAL CANDIDATES EXAMINED		
	M	F	T	M	F	T	M	F	T	M	F	T
Chung Hwa School, B.S.B.	10	7	17	5	4	9	1	-	1	16	11	27
Chung Ching School, Seria	21	12	33	3	-	3	2	1	3	26	13	39
Chung Hwa School, Kuala Belait	8	4	12	1	-	1	-	-	-	9	4	13
TOTAL	39	23	62	9	4	13	3	1	4	51	28	79

SOCIAL DEVELOPMENT

APPENDIX 10.7

10.7 CHINESE SENIOR MIDDLE EXAMINATION, 1972

SCHOOLS	PASSES FULL CERTIFICATE			PASSES SINGLE SUBJECTS			FAILURES IN ALL SUBJECTS			TOTAL CANDIDATES EXAMINED		
	M	F	T	M	F	T	M	F	T	M	F	T
Chung Hwa School, B.S.B.	5	2	7	1	4	5	-	-	-	6	6	12
Chung Ching School, Seria	14	6	20	4	2	6	-	-	-	18	8	26
TOTAL	19	8	27	5	6	11	-	-	-	24	14	38

APPENDIX 10.8

10.8 London G. C. E. 'O' Level 1972

Session	Passes	Failures	Total Candidates Examined
January	152	123	275
June	38	61	99
Total	190	184	374

10.9 London G. C. E. 'A' Level 1972

Session	Passes	Failures	Total Candidates Examined
January	27	22	49
June	1	9	10
Total	28	31	59

SOCIAL DEVELOPMENT

APPENDIX 10.9

TEACHERS BY QUALIFICATION MAY, 1972

TYPE OF SCHOOL/COLLEGE	NON-GRADUATE BELOW 'O' LEVEL OR CHINESE SENIOR MIDDLE				TECHNICAL INSTRUCTORS TRAINED				TOTAL			
	TRAINED		UNTRAINED		ED		UNTRAINED		UNTRAINED		TOTAL	
	M	F	M	F	M	F	M	F	M	F	M	F
KINDERGARTEN:												
Mission	-	-	-	7	-	-	-	2	-	15	-	17
Chinese	-	-	-	13	-	-	-	5	-	16	-	21
Other	-	-	-	-	-	-	-	2	-	2	-	2
Total Kindergarten	-	-	-	20	-	-	-	9	-	31	-	40
PRIMARY /PREPARATORY:												
Govt. Arabic	-	2	-	-	-	-	-	2	-	-	-	4
Govt. English	66	46	-	2	-	-	116	101	16	21	132	122
Govt. Malay	597	298	8	14	-	-	635	304	10	14	645	318
Mission	4	3	1	34	-	-	6	11	11	87	17	98
Chinese	1	1	7	26	-	-	7	3	27	88	34	91
Other	-	-	-	-	-	-	-	1	14	-	1	41
Total, Primary/Preparatory	668	350	16	76	-	-	769	435	64	210	833	645
SECONDARY:												
Govt. Arabic	3	2	-	-	-	-	25	8	-	-	25	8
Govt. English	5	7	-	-	-	-	129	74	24	13	153	87
Govt. Malay	78	18	-	-	-	-	255	45	1	-	256	45
Mission	-	1	-	1	-	-	20	14	33	31	53	45
Chinese	-	-	-	-	-	-	14	6	22	6	36	12
Total, Secondary	86	28	-	1	-	-	443	147	80	50	523	197
TECHNICAL:												
Govt. Trade	-	-	-	-	8	17	10	-	18	-	28	-
Total, Technical	-	-	-	-	8	17	10	-	18	-	28	-
TEACHER TRAINING:												
General Teachers	1	-	-	-	-	-	15	8	-	-	15	8
Religious Teachers	2	-	-	-	-	-	6	1	2	-	8	1
Total, Teacher Training	3	-	-	-	-	-	21	9	2	-	23	9
GRAND TOTAL	757	378	17	97	8	17	1243	600	164	291	1407	891

SOCIAL DEVELOPMENT

APPENDIX 10.10

10.10 London Chamber of Commerce Examination, May 1972

Stage & Subject	Passes	Failures	Total Candidates Examined
Stage I			
Typewriting	14	13	27
Shorthand	3	8	11
Book-Keeping	5	4	9
Stage II			
Typewriting	0	2	2
Shorthand	8	15	23
Book-Keeping	-	-	-
Stage III			
Typewriting	2	10	12
Book-Keeping	-	-	-
Shorthand	-	9	9
TOTAL	32	61	93

SOCIAL DEVELOPMENT

APPENDIX 10.11

10.11 Royal Society of Art Examination, 1972

Stage & Subject	Passes	Failure	Total Candidates Examined
<u>Stage I</u>			
Typewriting	33	72	10
Shorthand	2	9	11
Book-Keeping	4	24	28
English For Foreigners	2	1	3
Commerce	-	-	-
Arithmetic	-	-	-
English Language	-	-	-
<u>Stage II</u>			
Typewriting	10	43	53
Shorthand	1	13	14
Book-Keeping	5	3	8
English For Foreigners	-	-	-
English Language	1	4	5
Arithmetic	-	3	3
<u>Stage III</u>			
Typewriting	7	14	21
Shorthand	-	4	4
Book-Keeping	-	7	7
English For Foreigners	-	-	-
English Language	-	-	-
TOTAL	65	197	262

SOCIAL DEVELOPMENT

APPENDIX 10.12

10.12 City & Guilds Examination 1972

Subject	Failure	Passes	Total Candidates Examined
Mathematics 'A'	4	4	8
Mathematics 'B'	2	2	4
Practical Mathematics	3	-	3
Engineering Science	1	3	4
Radio & Line Transmission 'A'	2	3	5
Telecommunication Principles 'A'	7	6	13
Telecommunication Principles 'B'	2	-	2
Elementary Telecommunications			
Practice	2	4	6
Direct Current Machines and Alternative			
Currents	5	2	7
Telephone and Telegraphy 'A'	-	1	1
Communication Radio 'C'	1	-	1
Electrical Magnetism	6	-	6
Automotive	12	4	16
Electrical	15	7	22
Mechanical	5	11	16
TOTAL	67	47	114

SOCIAL DEVELOPMENT

APPENDIX 11

OVERSEAS STUDENTS BY TYPE OF SCHOLARSHIP & LEVEL OF EDUCATION, MONTH ENDING DECEMBER, 1972

TYPE OF SCHOLARSHIP	LOCATION	SECONDARY EDUCATION			NURSING			TEACHER TRAINING			DEGREE & DIPLOMA COURSES			POST-GRADUATE COURSES			TOTAL		
		M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
I. GOVERNMENT SCHOLARSHIP:	Australia	-	-	-	-	-	-	2	2	2	3	-	3	-	3	3	5	3	5
	Canada	-	-	-	-	-	-	-	-	-	4	-	4	-	4	-	4	-	4
	Malaysia	6	2	9	-	-	-	-	-	-	66	14	80	-	72	18	88	-	88
	Philippines	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Singapore	101	-	101	-	-	-	-	-	-	-	1	1	-	1	-	1	-	1
Total Government Scholarships		77	30	107	2	9	11	7	4	11	54	8	62	1	1	141	61	192	1
II. NON-GOVT. SCHOLARSHIP	United Kingdom	184	32	216	2	9	11	7	6	13	128	23	151	1	1	323	70	393	1
	Canada	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	1	-
	United Kingdom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Malaysia	-	-	-	-	-	-	-	-	-	3	-	3	-	3	-	3	-	3
	United Kingdom	-	-	-	-	-	-	-	-	-	7	-	7	1	1	8	-	8	-
Total Non-Government Scholarships		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
III. PRIVATE SCHOLARSHIP:	Australia	9	4	13	-	-	-	-	-	-	6	1	7	-	15	5	20	6	26
	Canada	-	-	-	-	-	-	-	-	-	1	3	4	2	3	3	6	1	1
	Japan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	New Zealand	1	-	1	-	-	-	-	-	-	5	8	13	-	6	8	14	-	-
	Taiwan	4	-	4	-	2	2	-	-	-	34	4	38	-	38	6	44	-	-
Total Private Scholarships		20	10	30	-	74	76	3	3	3	7	31	1	1	45	94	139	-	-
Total Private Scholarships	U.S.A.	-	-	-	-	-	-	-	-	-	1	-	1	-	1	-	1	-	-
	Malaysia	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Singapore	35	14	50	-	-	-	-	-	-	72	23	95	3	111	118	229	-	-
	United Kingdom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	United Kingdom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GRAND TOTAL		220	46	266	2	85	87	7	9	16	207	46	246	5	441	186	627	-	-

SOCIAL DEVELOPMENT

APPENDIX 12

ADULT EDUCATION , 1972

12.1 ENROLMENT & STAFF, MALAY MEDIUM

COURSES	ENROLMENT			STAFF		
	M	F	T	M	F	T
1. Literacy/Basic Education	301	675	979	60	12	72
2. Malay for Non-Malays	11	15	26	2	1	3
3. Commercial Subjects						
a) Shorthand	119	77	196	13	-	13
b) Typing	136	136	272	20	-	20
4. Foreign Languages						
a) Japanese	13	1	14	1	-	1
b) Chinese	15	15	30	1	-	1
5. Music	3	10	13	-	1	1
6. Secondary Education						
Form 1	39	7	46	11	-	11
Form 2	7	5	12	4	-	4
Form 3	98	116	214	30	1	31
Form 4	39	16	55	8	-	8
Form 5	80	26	106	15	1	16
Form 6	21	8	29	5	-	5
7. Domestic Subjects	-	1948	1948	-	29	29
TOTAL	882	3055	3937	170	45	215

SOCIAL DEVELOPMENT

APPENDIX 12.2

12.2-ENROLMENT & STAFF. ENGLISH MEDIUM

COURSES	ENROLMENT			STAFF		
	M	F	T	M	F	T
1. <u>Single subject, English Language</u>						
Primary 2	248	69	317	14	2	16
Primary 4	304	133	437	18	3	21
Primary 6	177	60	237	9	4	13
Form 1	141	92	233	15	1	16
Form 2	86	21	107	10	-	10
Form 3	78	21	99	3	2	5
Form 4 & 5	18	-	18	1	-	1
TOTAL	1052	396	1448	70	12	82
2. <u>Full Subjects</u>						
Form 1	66	20	86)			
Form 2	40	23	63)	20	2	22
Form 3	138	36	174)			
Form 4	46	20	66)			
Form 5	99	20	129)	38	2	40
Form 6	78	19	97)			
TOTAL	467	148	615	58	4	62
3. <u>Commercial Subjects</u>						
(i) Shorthand	38	158	196	3	1	4
Typewriting	27	231	258	2	6	8
Book-Keeping	41	24	65	4	-	4
TOTAL	106	413	519	9	7	16
4. <u>Foreign Language, French</u>	8	22	30	1	1	2
5. <u>Technical Subjects</u>	15	-	15	3	-	3
TOTAL, English Medium	1648	979	2627	141	24	165

SOCIAL DEVELOPMENT

12.3 ADULT EDUCATION EXAMINATION RESULTS, 1972

COURSES	ELEMENTARY	STAGE INTERMEDIATE	ADVANCED	TOTAL NO. OF PASSES
1. Literacy/Basic Education	141	213	146	500
2. Commercial Subjects:	48	55	31	134
(i) Typing	1	4	4	9
(ii) Shorthand	1	1	1	3
(iii) Book-Keeping				
Total, 1 & 2	191	273	182	646
3. Languages:	PRIMARY	STAGE	SECONDARY	TOTAL NO. OF PASSES
(i) Malay	1	3	1	7
(ii) Chinese	7	-	-	13
(iii) Japanese	9	-	-	3
(iv) French	2	-	-	13
(v) English	3	-	-	487
	104	104	75	
Total, 3	125	104	75	523

SOCIAL DEVELOPMENT

APPENDIX 13

ENROLMENT & STAFF FOR MALAY LANGUAGE CLASSES IN CHINESE AND MISSION SCHOOLS, 1972

NO. OF SCHOOLS	NO. OF CLASSES	NO. OF PUPILS			NO. OF TEACHERS		
		M	F	T	M	F	T
I. CHINESE SCHOOLS							
1. Chung Hwa School, B.S.B.	39	825	715	1540	2	3	5
2. Chung Hwa School, K.B.	22	436	372	808	1	2	3
3. Chung Ching School, Seria	27	935	689	1624	2	5	7
4. Chung Hwa School, Tutong	6	88	55	143	-	1	1
5. Chung Hwa School, Tutong	6	68	44	112	-	1	1
6. Chung Hwa School, Kiudang	5	16	14	30	1	-	1
7. Chung Lian School, Sg. Liang	6	73	60	133	-	-	1
8. Pui Yuek School, Bangar	5	23	21	44	-	-	1
Total, Chinese Schools	116	2464	1970	4434	7	13	20
II. MISSION SCHOOLS							
1. St. Andrew's School, B.S.B.	21	480	271	751	3	2	5
2. St. George's School, B.S.B.	21	372	316	688	1	2	3
3. St. Michael's School, Seria	25	846	2	848	1	2	3
4. St. Margaret's School, Seria	22	352	404	756	1	3	4
5. St. Angela's School, Seria	20	-	817	817	2	2	4
6. St. John's School, K. Belait	20	411	357	768	2	2	4
7. St. James School, K. Belait	10	213	133	346	1	1	2
Total, Missions Schools	139	2674	2300	4974	11	14	25
GRAND TOTAL	255	5138	4270	9408	18	27	45

(b) MEDICAL AND HEALTH SERVICES
ADMINISTRATION

The Director of Medical Services is the Head of the Medical & Health Department and is responsible for the Clinical and Preventive Public Health Services within the State.

He is, in addition, the Registrar of Births & Deaths, Registrar General of Adoptions, Registrar of Medical Practitioners and Dentists and the Registrar of Midwives, He is also the Licensing Officer under the Poisons Enactment. He is gazetted as the Port Health Officer and is directly responsible for administering the following laws in Brunei:-

- 1. The Quarantine and Prevention of Disease Enactment**
- 2. The Births and Deaths Registration Enactment (1923)**
- 3. The Medical Practitioners & Dentists Enactment (1956)**
- 4. The Midwives Enactment (1955)**
- 5. The Dangerous Drugs Enactment (1956)**
- 6. The Poisons Enactment (1956)**
- 7. The Nurses Registration Enactment (1961)**
- 8. The Registration of Adoptions Enactment (1961)**

The Director of Medical Services is responsible for initiating policy for the progressive development of the Department. Also, as head of the Government Medical & Health Services, he is responsible for the planning, pro-

SOCIAL DEVELOPMENT

gramming and implementation of the National Health programme, in conjunction with the Commissioner of Development.

The Senior Staff of the Medical & Health Department in 1972 included, in addition to the Director of Medical & Health Services:-

- a) 8 Clinical Specialists
- b) 1 Medical Officer of Health
- c) 1 School Health Officer
- d) 21 Full-time Medical Officers
2 Part-time Lady Medical Officers
- e) 4 Dental Officers
- f) 2 Pharmaceutical Chemists
- g) 2 Matrons
- h) 1 Sister Tutor
- i) 1 Clinical Tutor
- j) 1 Midwifery Tutor
- k) 2 Physiotherapists
- l) 1 Malariologist

Financial Provision

Expenditure for 1972 was under Specific Head 29 of the State of Brunei Estimates of Revenue and Expenditure. The overall provision was \$B9,928,062. This included \$B6,145,445, estimated expenditure for personnel.

SOCIAL DEVELOPMENT

Under Development Subhead 109 the sum of \$B2,082,706 was provided for Medical Development projects.

It is of significant interest to observe the steady increase in expenditure required to maintain the Medical Services at a reasonably efficient level. Provision during the last five years is shown in the following table:-

Year	Subheads	Vote	Development
1968	29	B\$ 7,978,365	B\$ 2,730,000
1969	29	7,979,450	5,700,000
1970	29	8,493,131	3,677,375
1971	29	9,059,921	2,909,251
1972	29	9,928,062	2,082,706

In addition to the above a sum of \$B200,000 was provided for the training overseas of Medical Department personnel under Subhead 2/6 "Service Training".

The funds provided for the Medical Services for 1972 including Development, was 5.72% of the total State Provision (\$209,733,190)

As in past years, increased expenditure has followed professional progress and additional construction. The maintenance of modern methods of treatment has involved considerable added expenditure.

When such methods, because of the State's limitations, are not available within the State, entitled patients have been sent aboard for treatment as in the case of major cardiac

SOCIAL DEVELOPMENT

surgery, for radiotherapy and the occasional Renal Unit patient.

General Medical Services

The General Medical Services in the State are provided through several hospitals, outdoor clinics, travelling dispensaries, and a Flying Medical Team.

The State is divided into 4 Administrative Districts. Of these, Brunei and Muara District includes the Capital, Bandar Seri Begawan. The Headquarters of the Medical & Health Department is located in the Capital. Here also is the largest Government Hospital to which are attached most of the Clinical Specialists who also visit other parts of the State periodically. There are hospitals also at Kuala Belait and in Bangar.

The General Hospital in Bandar Seri Begawan, built in 1950, was extended in 1971 by a completely airconditioned male surgical ward to a total of 259 beds. An extension of the Renal Unit (Haemodialysis) and a small medical emergency ward were equipped.

An Operating Theatre extension was almost completed by the end of 1971. A modern Mental Unit was opened in 1968 : this only has 14 beds but provides up to date therapeutic facilities. A new Chest Clinic and an Administrative Centre for the State Anti-Tuberculosis Project was in operation and is in close proximity to the Tuberculosis wards.

In 1972 planning was re-commenced for a new main State Hospital in Bandar Seri Begawan.

SOCIAL DEVELOPMENT

The completed new hospital at Kuala Belait was taken into use in October, 1972. It has 185 beds but is not yet in full operation. His Highness the Sultan and Yang di-Pertuan has graciously permitted it to be named to Rumah Sakit Suri Seri Begawan in honour of his Royal mother. It is completely newly equipped with a large operating theatre complex including two quite distinct theatre suites. The Eye Department has its own operating theatre and there is a large casualty theatre. There is also provision for extension.

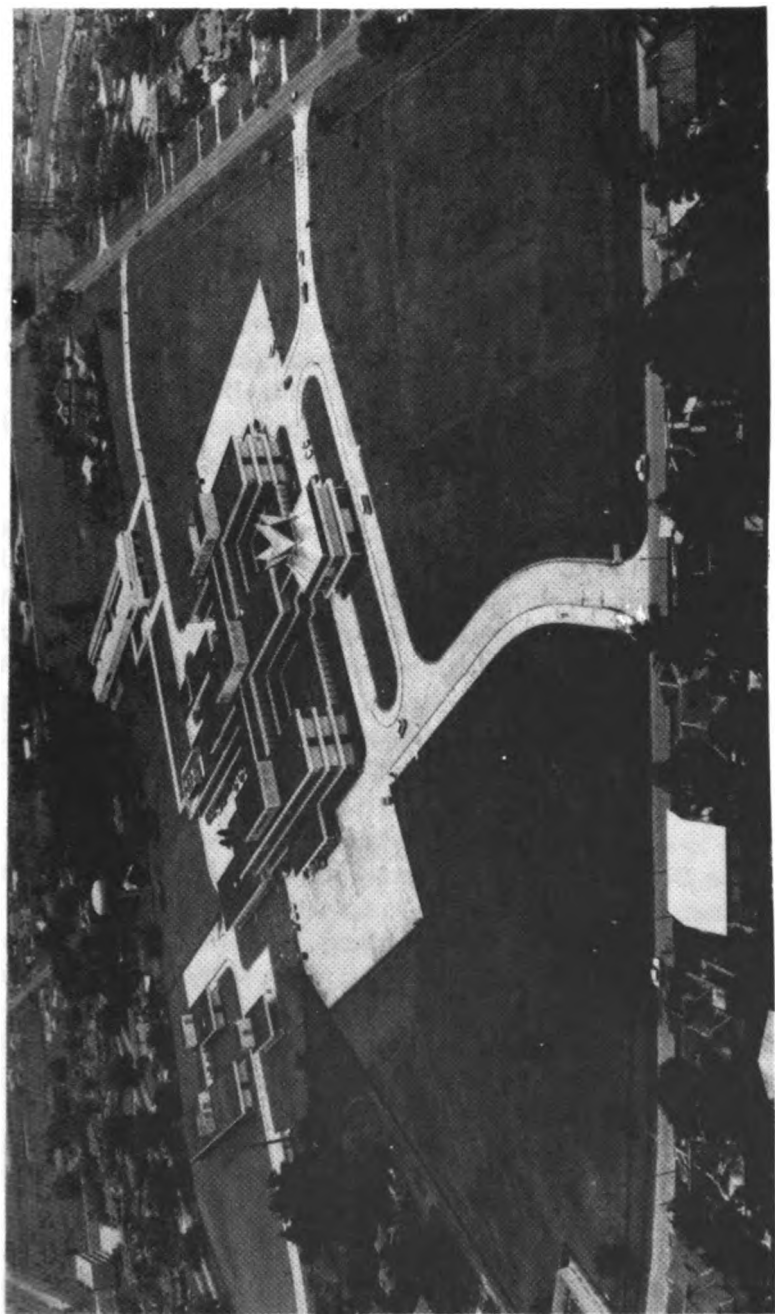
The new Tutong Hospital was completed by the end of 1972. Its composition is on a forward planning basis. It has only one ward of 20 beds constructed at present with planned sites for later construction of more than a hundred beds. All main services have been built. There is a theatre suite; a maternity unit; laboratory, X-Ray and Dental Departments. A maternity & Child Health Clinic and the outpatients departments were in operation from the 11th December, 1972.

The hospital at Bangar in Temburong District has 16 beds. It is visited weekly by a Medical Officer and fortnightly by a Lady Medical Officer who attends the Maternity & Child Health Clinics.

Specialists Clinical Services are available at Bandar Seri Begawan where there are two Specialist Physicians, a Specialist Surgeon, an Ophthalmologist, an Obstetrician and Gynaecologist and an Anaesthetist.

One of the Specialist Physicians is a Specialist Chest Physician.

A Specialist Surgeon was appointed in 1970, to the District Hospital, Kuala Belait. There is also a Specialist Anaesthetist here.



An aerial view of the Ultra modern multi million dollar Suri Seri Begawan hospital at Kuala Belait.

SOCIAL DEVELOPMENT

Female Clinics at the General Hospital and at the District Hospital, Kuala Belait, were in the care of Lady Medical Officers.

Treatment of mental patients is in the hands of a Medical Officer experienced in this speciality who has also attached to him an experienced Mental Health Sister. Two members of the Brunei Nursing Staff who had undergone a year's training in Mental Health Nursing in the United Kingdom rejoined the Department in 1968 and have since been attached to the Mental Wards for duty.

Movements of patients to the main hospital centres is by ambulance along the main road and subsidiary roads; and by outboard engine boats along the main waterways. From the remote kampongs (villages), patients are lifted to the nearest hospital by helicopter provided by the Royal Brunei Malay Regiment. The Flying Medical Team is provided by the Medical & Health Department. The administration of the Flying Doctor Service is under the direct control of the Director of Medical Services.

The Brunei Shell Petroleum Company Limited makes an important contribution to the care of the sick of the State. The Company has a well staffed hospital at Seria of 85 beds. In the main, the Brunei Shell Petroleum Company Limited also provides public health services within its area. Excellent cooperation between the Brunei Shell Petroleum Medical Department and the Government Medical & Health Department has always been maintained.

The Flying Doctor Service

This Services, conducted by helicopter, was introduced in 1965 and has made possible the provision of modern

SOCIAL DEVELOPMENT

medical facilities to all kampongs (villages) in the remote parts of the State. Many of these were previously, completely isolated for long periods in every year.

Until the first half of 1971 the flying Doctor Team consisted of a doctor, midwife and nurse. It has latterly been found satisfactory to send a Flying Medical Team with an experienced Senior Hospital Assistant and a nurse trained in midwifery. All very sick patients and others requiring hospital treatment are immediately evacuated to the General Hospital, Bandar Seri Begawan or to the District Hospital at Kuala Belait.

A most important function of the Flying Medical Team is to maintain a high state of immunisation. The rural population is very cholera inoculation conscious and very nearly 100% are regularly inoculated. Infants are immunised against diphtheria, whooping cough and tetanus. In 1972 E. C.G. inoculations for all infants up to the age of 3 months was commenced. All recipients are registered. The Team also instructs kampong residents in the elements of hygiene.

The Service continues as regular flights three times a week. Emergencies are attended to as they occur.

The State Road System has considerably improved since 1965. A number of kampongs no longer need to be visited by the Flying Medical Team. This has made it possible to complete the circuit of the ulu (outlying) kampongs (villages) in four weeks. It previously took eight weeks.

The basis of the organisation of the Service is the division of the 268 rural kampongs (villages) into 24 groups. In each group one kampong is called the Key Kampong and is the main kampong visited : the remaining kampongs feed

SOCIAL DEVELOPMENT

their patients to the Key Kampong. However, exigencies some of the feeding kampongs are also visited.

Two days before each flight the public is informed, by radio announcement, when and where the Flying Medical Team will visit so that patients and pregnant women can be assembled.

A good radio intercommunication system has been established. Information about medical emergencies is readily received and can be attended by emergency helicopter flights. The internal road system is making rapid progress in development, and many kampong have been removed from the Flying Medical Team programme. In time it should be necessary only to bring in emergency cases.

Training

The personnel required to maintain the Medical & Health Department as its present standard cannot all come from the State of Brunei for several decades at the present rate of recruitment and training. Medical Officer in particular will have to be recruited overseas.

Two Brunei Doctors, however, commenced serving in 1968 and were attached to Specialist Officers in order to initiate training for specialist careers. This is the pattern to be followed in the future, in order to ensure coverage for specialist requirements. In August, 1969, a third Brunei Doctor returned to the State.

In 1970 tow more Brunei Doctors returned for service in the State; and one left for the United Kingdom to take up a course of study in Public Health. The later returned to Brunei in 1971 and became the first Brunelian Medical Officer of Health.

SOCIAL DEVELOPMENT

Another Bruneian Doctor went to London in 1971 to study Public Health and to obtain the D.P.H. which he succeeded in doing but has become a Medical Specialist Trainee.

A Brunel Scholarship student has taken over the bacteriological laboratory work as a non-medically qualified Bacteriologist. Another qualified in 1971 as a Biochemist. Later in 1971 he was in a hospital laboratory attachment in the United Kingdom before returning to Brunel to join the Medical Department.

A postgraduate Hospital Assistant (male nurse) succeeded in obtaining the Diploma of Clinical Tutor at the Royal College of Nursing in London. He returned to Brunel to take up the post of Clinical Tutor in Nursing, a valuable asset.

A number of scholarship students and some private students are training as nurses abroad. The policy is that they return to Brunel as soon as they have qualified in general nursing and in midwifery.

Within the State is a School of Nursing in the charge of a Sister Tutor. There is also a School of Midwifery in the care of a qualified Midwifery Sister Tutor.

The Medical Department Overseas Training and Scholarship Committee makes recommendations to Government periodically of various medical staff for postgraduate qualification courses as Ward Sisters, Psychiatric Nurses and in other nursing specialties. School Dental Nurses and Dental Mechanics are usually trained at the Dental Training School in Penang.

Laboratory Technicians and Public Health Inspectors are currently under training in Singapore.

SOCIAL DEVELOPMENT

A highly successful course of training for Junior Health Inspectors was conducted in the State in 1970 by a W.H.O. Consultant. 12 Brunei Officers whose educational standard was insufficient for the Royal Society of Health Diploma Course for Public Health Inspectors received comprehensive instruction in all aspects of Environment Sanitation. All were successful in the terminal examination and were awarded Departmental Diplomas.

The State's limited population makes it obligatory to recruit most senior grades of Medical Department staff from abroad.

The Dental Services

In addition to the main Dental Clinics at the General Hospital, Bandar Seri Begawan, and at the District Hospital, Kuala Belait, there are many school dental clinics in operation, 15 of which were brought into use in 1966, and are fully equipped.

Many dental patients, young and old, are brought to Bandar Seri Begawan for dental treatment under the auspices of the Flying Medical Team.

Refresher Courses for Dental Mechanics have been organised with the cooperation of the Dental Training School in Penang. Officers are sent on these when necessary.

One Dental Officer was sent to the United Kingdom for postgraduate training and is still under training.

A Brunei Government Scholarship student qualified in Dentistry in Australia and will join the Dental Department as a Dental Officer in 1973.

SOCIAL DEVELOPMENT

School Health Service

This service was started in 1967 under a very experienced School Medical Health Officer who continued with this through 1971. This is basically a continuation of the Maternal & Child Care Services and will eventually result in continuous medical documentation for each individual in the State.

The importance of this Service will be appreciated from the data. In 1972 44,457 children attended various types of School in the State.

It is estimated that about 70% of all pupils have access to this Service. The remainder, especially in the more remote rural areas are cared for by the Flying Medical Team.

It is envisaged that 1/3 of all school children will be medically examined every year so that the whole school population will be routinely covered in 3 years.

School Health Work is continued with the following objectives :-

1. Inspection of environmental sanitation
2. Medical examination of pupils
3. Follow-up defective children
4. Correction of defects
5. Control of communicable diseases
6. Health Education

There were no epidemics among school children during 1972. The general health was satisfactory. Immunisation was maintained up to a high standard. Health Education lectures and demonstrations were regularly delivered by Health Education Technicians.

SOCIAL DEVELOPMENT

The average height/weight table for Brunei Children, previously prepared by the School Medical Officer helped in the detection of deviations from normal average development.

A pilot study of the effect of supplementing diet with a protein food was carried out in 1971 in one school (Sekolah Menengah Hassanal Bolkiah). It was found that 84% of the children under supervision increased in weight in the course of a month by from 2 - 8 lbs.

Dental defects are the commonest defects found. As the School Dental Service develops more school children will reach a satisfactory dental standard. New schools being built, have a dental treatment room included in their design.

Some categories of children, notably Chinese, have defective vision. These are referred for refraction. Where children cannot afford to purchase spectacles, Government often does this for them.

Some children with operable congenital heart lesions have had successful surgical treatment in Australia at Government expense, or with partial Government aid.

The work of the School Health Service has been greatly facilitated by the cooperative assistance of the Education Department.

Malaria in Brunei.

Malaria has been recorded in Brunei since 1921. Although some parts have been free or relatively free, malaria has been a serious problem in others.

SOCIAL DEVELOPMENT

A malarial survey was carried out in 1952 and 1953 by an Australian Survey Team and W.H.O. Specialists.

On the recommendation of W.H.O. a National Malaria Eradication Project was initiated with assistance from W.H.O., on an agreement signed in 1962. W.H.O. assigned a Malarial Adviser, and a W.H.O. Sanitarian as a Junior Adviser. Government approved expenditure of \$B5,504,670.00 for the 5-year period 1963 to 1968.

After carrying out a Geographical Reconnaissance of the whole State, an 'Attack Phase' was launched in 1965. In 1967, the 'Consolidated Phase' was entered. Brunei is now in a state of 'Vigilance' which is very carefully maintained.

The work of the original Malaria Eradication Project has been intergrated (since 1970) with the Public Health side of the Medical Department and is carried on by the MALARIA CONTROL STAFF. W.H.O. Advisers were completely withdrawn from the 1st January, 1968.

The Malaria Control Staff are engaged in the following activities :-

Barrier house spraying with DDT to prevent the re-introduction of malaria into Brunei from neighbouring territories: the investigation of all recorded cases of malaria including examination of neighbouring persons, local vectors for parasites and preventive DDT spraying: continuous survey of areas of filariasis : aedes aegyptae control : investigation of biting midges.

SOCIAL DEVELOPMENT

Results in 1972

Malarial cases

15 positive cases were discovered in 1972 : 14 by P.C. D. (Passive Case Detection) : one during routine examination of immigrant labour. These on epidemiological analysis were designated as 3 relapse cases : 11 imported : 1 cryptic. There were no frankly indigenous cases.

Aedes Aegyptae

A pilot study of control of *Aedes Aegyptae* had been successful. Based on this all water containers in breeding areas were treated with Abate granules. The breeding areas include Kampong Ayer, some parts of Bandar Seri Begawan near Kampong Ayer and Kuala Belait Town.

It is hoped that effective control of *Aedes Aegyptae* breeding will now be achieved. The position is being watched carefully.

Biting Midges

Biometrics of the Brunei beaches continues to be studied. Prevalence has been found to be more or less equal throughout the year.

Brunei was visited in 1972 by the Regional W.H.O. Adviser in Vector Biology and Control, Professor C.Y. Chow. He was particularly concerned with progress in the investigation of biting midges : control of *Aedes Aegyptae* : rodent control.

General Public Health Cover

The State of Brunei is constantly exposed to the danger of entry, or emergence, of cholera. A high standard of immunisation is maintained throughout the State. The danger

SOCIAL DEVELOPMENT

will, however, persist until sophisticated sanitation exists throughout, and until an adequately treated water supply is everywhere available. Annually, before the known State celebrations, cholera immunisation programmes are instituted.

Also, the Flying Medical Team endeavours to maintain as near as possible 100% cover in the remote kampongs.

There was no serious epidemic outbreaks in 1972.

In fact, 1972 was notable for considerably fewer reported cases in the usual epidemic groups. Thus, in 1971, there were 544 cases of measles; in 1972, 168. There were 894 cases of mumps in 1971 but only 206 in 1972.

However, 43 more cases of Tuberculosis (all forms) were reported in 1972, to a total of 285.

It is of interest to note there were not many more cases notified of Venereal Disease than in 1971.

Port Health Work

The relationship of Brunei to the rest of the world is changing rapidly.

The international Airport at Bandar Seri Begawan was opened for partial use in October, 1972, and very rapidly became a progressively busier port.

The international Port at Muara would be opened in the near future and, in fact, in February, 1972, was able to receive H.M.S. Britannia on the occasion of Her Majesty Queen Elizabeth the Second's visit to Brunei.

SOCIAL DEVELOPMENT

In 1972, 2,918 aircraft arrived at Brunei Airports, with 45,590 disembarking passengers. Of these, 6,553 were kept under surveillance for cholera or smallpox.

In the various ports 617 ships were inspected medically in 1972, and given pratigue. There were 26,167 passengers.

A close watch has been maintained during epidemic periods on all incoming food supplies. In this, close co-operation has been maintained, and always received, from the Marine Department.

The State Agricultural Department's Veterinary Officer maintains close contact with the Medical & Health Department, thereby coordinating action in the control of importation of animals which may harbour diseases communicable to mankind, such as RABIES.

The following communicable diseases were reported during 1970 to 1972 :-

NOTIFICATION OF INFECTIOUS DISEASES

<u>Diseases</u>	1970	1971	1972
Cholera	24	-	-
Typhoid, paratyphoid fever and other Salmonella infections	65	30	33
Bacillary dysentery and amebiasis	24	32	43
Enteric and other diarrhoeal diseases	60	25	119
Tuberculosis (all forms)	189	242	285
Leprosy	1	-	7
Diphtheria	11	-	1
Whooping cough	4	1	-

SOCIAL DEVELOPMENT

Tetanus	-	1	1
Acute poliomyelitis	-	-	1
Measles	408	544	168
Infectious hepatitis	2	6	5
Chicken-pox	489	645	229
Mumps	300	894	206
Gonococcal infections	84	47	53
Syphilis	1	1	3
Other venereal disease	-	-	3
Filarial infection	5	6	6
Malaria	10	15	15
Trachoma	1	-	-
Rubella	1	22	10
Scarlet fever	1	1	1
Scrub typhus	-	-	3
Puerperal fever	1	-	3
Ophthalmia	-	-	1
Pemphigus	-	-	16

SOCIAL DEVELOPMENT

Water Supply

Piped water supplies are available at the bigger population centres but much work is being done to enhance these for capital Bandar Seri Begawan, Kuala Belait and Seria.

For Bandar Seri Begawan and neighbouring areas the water supply will eventually be augmented through the Tutong water scheme.

Work on this, already advanced, has regrettably been temporarily suspended for administrative reasons. It is considered that about 40% of the total population live in kampongs without "protected" water supplies.

Water rationing was observed during the worst supply periods.

Although the Public Works Department is responsible for the public water supply throughout the State it is the duty of the Medical & Health Department to inspect and examine the water supply, as required, and to recommend action necessary to protect health.

Sewerage

Two large sewerage schemes were started in 1968 for the larger urban areas of Kuala Belait/Seria and Bandar Seri Begawan. These were completed in 1972. The next step is to connect individual users.

At present, new houses, especially those built under Government auspices are required to have septic tanks built. Primitive methods of disposal of night soil are used

SOCIAL DEVELOPMENT

in the more remote areas. Bore hole latrines have been constructed in number of places by the Health Department.

Garbage disposal is by collection, dumping and by neutralisation by burning off.

Maternity Services

Active ante-natal and post-natal services are maintained throughout the State. These are in the care of qualified Health Sisters, assisted by Midwives and Health Nurses. The welfare of infants is also supervised at these clinics, in which the usual immunisations are provided.

Maternal & Child Health Clinics are both Static and mobile. Travelling Health Clinics were conducted at 23 kampongs in Brunei District; 9 in Temburong; 20 in Tutong; and 6 in Belait District.

It is again pleasing to be able to report that the ante-natal clinics are becoming even more popular. Attendances increased from 31,293 in 1971 to 34,703 in 1972. This is very considerable for our small population.

Pregnant women attending ante-natal clinics have a general medical examination in the early stages of pregnancy. Primigravidae are seen in later pregnancy for pelvic assessment.

Maternal Mortality

There were 4 registered deaths in 1972 in women during pregnancy and childbirth. The maternal mortality was 0.798.

SOCIAL DEVELOPMENT

The progress in maternal mortality is shown by the figures in the following table :-

Year	No. of Maternal Deaths	Maternal Mortality Rate (per 1000 live-births)
1970	6	1.25
1971	4	0.75
1972	4	0.798

The following tables summarise the maternity and child welfare work carried out in the State during 1972 :-

ATTENDANCES OF PREGNANT WOMEN AT HEALTH CLINICS

URBAN AREA

No. of attendances per session	Number of sessions held			
	B.S.B.	Seria	Kuala Belait	Total
Over 20	199	48	49	296
Total Number of sessions held	199	48	49	296
Total Number of attendances	13,783	2,449	4,065	20,297
Number of attendances per session	69.3	51.0	83.0	68.6

SOCIAL DEVELOPMENT

RURAL AREA

No. of attendances per session	Number of sessions held					
	B.S.B.	Kg. Ayer	Temb.	Tutong	Belait	Total
Over 20	50	84	4	33	-	171
15 - 19	13	10	13	16	18	70
10 - 14	22	-	40	29	10	101
5 - 9	32	-	94	67	15	208
1 - 4	28	-	47	39	13	127
Total number of sessions held	145	94	198	184	56	677
Total number of attendances	3,078	4,245	1,533	2,102	516	11,474
No. of attendances per session	21.2	45.2	7.7	11.4	9.2	16.9

DELIVERIES UNDER SUPERVISION, 1972

District	Total No. of births	No. of deliveries		Total	%	Still- births
		In hospital	Attended by midwives			
Brunei	2,993	1,016	875	1,891	63.18	21
Temburong	199	-	27	27	13.57	-
Tutong	514	-	82	82	15.95	-
Belait	1,302	811	257	1,068	81.41	12
Total	5,008	1,827	1,241	3,068	61.41	33

SOCIAL DEVELOPMENT

The total number of registered births in 1971 was 5,008. This, therefore, means that 61.41% of all registered births were under the supervision of the Medical & Health Department and of the Brunei Shell Petroleum Co. Ltd. Hospital.

Attendances at 'Child Health Clinics' have again been very satisfactory in 1972. A total of 93,887 attendances was recorded. This permits young children and infants to be immunised against the common infectious diseases, a service which is also performed in the remote areas by the regular Flying Medical Team. Thus :-

<u>Small-pox</u>		<u>Poliomyelitis</u>		<u>C.D.T.</u>	
Primary	3,855	1st dose	4,967	1st dose	173
		2nd dose	4,131	2nd dose	85
Revaccination	13,222	3rd dose	3,742	3rd dose	108
		Booster	3,014	Booster	208
<u>D.D.T.</u>		<u>B.C.G.</u>		<u>Cholera Immunisation</u>	
1st dose	5,038	H.M.P. Test	1,387	1st dose	7,798
2nd dose	4,219	Neg. reactor	2,004	2nd dose	5,935
3rd dose	3,808	BCG given	7,561	Booster	94,682
Booster	2,478				

SOCIAL DEVELOPMENT

CAUSES OF DEATHS IN THE STATE OF BRUNEI, 1972

These are summarised for 1972 in the following table in accordance with the latest International Code :-

Code	Causes of Deaths	1972	Per thousand mid-year population (1972)
B 4	Enteritis and other disarrhoeal diseases	29	0.205
B 5	Tuberculosis of respiratory system	23	0.163
B 6	Other tuberculosis, including late effects	3	0.021
B 11	Meningococcal infection	2	0.014
B 17	Syphilis and its sequelae	1	0.007
B 18	All other infective and parasitic diseases	3	0.021
B 19	Malignant neoplasms, including neoplasms of lymphatic and haematopoietic tissue	60	0.424
B 20	Benign neoplasms and neoplasms of unspecified nature	4	0.028
B 21	Diabetes mellitus	4	0.028
B 23	Anaemias	7	0.049
B 26	Chronic rheumatic heart disease	1	0.007
B 27	Hypertensive disease	7	0.049
B 28	Ischaemic heart disease	23	0.163
B 29	Other forms of heart disease	38	0.269
B 30	Cerebrovascular disease	34	0.240
B 31	Influenza	1	0.007

SOCIAL DEVELOPMENT

B 32	Pneumonia	32	.226
B 33	Bronchitis, emphysema and asthma	15	0.106
B 34	Peptic ulcer	4	0.028
B 36	Intestinal obstruction and hernia	1	0.007
B 37	Cirrhosis of liver	7	0.049
B 38	Nephritis and nephrosis	3	0.021
B 39	Hyperplasia of prostate	1	0.007
B 40	Abortion	2	0.014
B 41	Other complications of pregnancy, childbirth and the puerperium. Delivery without methods of complication	4	0.028
B 42	Congenital anomalies	15	0.106
B 43	Birth injury, difficult labour and other anoxic hypoxic condition	41	0.290
B 44	Other causes of perinatal mortality	35	0.247
B 45	Symptoms and ill-defined conditions	279	1.972
B 46	All other diseases	15	0.106
B 47	Motor vehicle accidents	32	0.226
B 48	All other accidents	13	0.092
B 49	Suicide and self-inflicted injuries	2	0.014
B 50	All other external causes	1	0.007
<hr/>			
Total		742	5,244

SOCIAL DEVELOPMENT

Note On Medical Department Development

A short note is necessary to explain the sequence of constructional development within the Medical Department.

In 1963/1964 the most important requirement was the immediate enhancement of the facilities available at the General Hospital in the Capital Bandar Seri Begawan. 40 beds were added including new Maternity Wards and new First Class Wards. The Medical Store were enlarged. Consulting Rooms for specialists were constructed and an additional Dental Clinics with Stores. Another Pathological Laboratory was built. A Doctor's Common Room was provided.

In 1971 an additional airconditioned Male Surgical Ward of 20 beds was opened.

In 1972 the operating theatre was extended. It now includes 2 main theatres and a casualty theatre.

The next requirement was the replacement of the old hospital at Kuala Belait with a modern hospital. Planning for this construction was then proceeded with. This new hospital of 185 beds was taken into use in October, 1972. Because of staff deficiencies, one floor is still in reserve.

Having arranged this provision, attention was turned towards the building of a hospital for Tutong District. This was planned with all the service requirements such as pathological laboratory, operating threat, maternity unit, dental department, x-ray department, etc. for a moderate sized hospital. At present, however, the allotted sum for expenditure permitted the construction of only one polyvalent

SOCIAL DEVELOPMENT

"ward" which is in fact a unit of six small independent wards. Provisional planning provides for similar ward additions, on site, up to 160 beds. The hospital was taken into use for outpatients, and Maternal and Child Health Clinic service to begin with at the end of the year.

This will present no problem as the construction is of bungalow type. The next step in the near future will be the planning and construction of an adequate and modern hospital with all modern facilities for the Capital Town, Bandar Seri Begawan.

There is also a need for an improved small hospital at Bangar Town in Temburong District. This has also been recommended for construction.



His Highness the Sultan receiving a gift from the Penghulu of Mukim Limau Manis during a visit to the Mukim.

SOCIAL DEVELOPMENT

(c) Town and Country Planning

Administration

On the 1st January 1972 the Town and Country Planning Department came into existence as a separate Government Department and moved later in the year to new premises which provide much more space and better operating conditions.

On the staff side, the VSO planner left the end of March but an Assistant Town and Country Planning Officer was recruited and arrived in early November. News of the recruitment of a new VSO planner was received and his arrival was expected in January 1973. There was need to increase technical staff in view of the increase in volume of work.

Policy

The aim of the Government is to provide a service which will prepare physical planning schemes for short, medium and long term development in the urban and rural areas in order to promote co-ordinated orderly, safe, healthy and economically viable towns and villages, with adequate transportation networks to give the ease of mobility so necessary in present times. The service will not only exercise control over building and land development in both the public and private sectors but will actively encourage sound development.

SOCIAL DEVELOPMENT

Legislation

The Town and Country Planning (Development Control) Order 1972 was approved by H. H. The Sultan on 19th September 1972. The legislation will become effective when Development Control Areas have been declared, the Competent Authorities appointed and the necessary Regulations approved. The regulations which are immediately required have been drafted by the Town and Country Planning Officer. These are :-

Town and Country Planning Regulations No. 1

- Control of Subdivision and Consolidation of Land;

Town and Country Planning Regulations No. 2

- Miscellaneous Provision;

Town and Country Planning Regulations No. 3

- Control of Development and Use of Land and Buildings.

The Regulations No.1 have been gazetted but have not yet been implemented.

Rural Planning

Town Planning advice has been provided generally on subdivision of land in rural areas and on reservations for Government purposes.

Urban planning

The Land Use Zoning Plans prepared for the central area of Bandar Seri Begawan have been now extended to cover a larger area and are now being considered by the Government.

Development Planning proposals for the Central Business District of Bandar Seri Begawan have been prepared and are being considered by the Government as is a Redevelopment Scheme for the proposed Commercial area at Kampong Kianggeh.



A girl parking attendant is seen here busy at work.

SOCIAL DEVELOPMENT

A comprehensive scheme for a residential and commercial development in Bandar Seri Begawan is in the course of preparation. Detailed layouts have been prepared for an area for night stalls in Bandar Seri Begawan and for a new shopping centre at Muara. Sketch plans for a proposed go-down development have also been prepared, these have been approved by the Muara Development Control Committee and further steps are now being taken to implement the proposals.

A proposed Bandar Seri Begawan Road Transportation: Main Distributor Network plan and report have been prepared and are being considered. When this network has been agreed, proposals can be made for the planned expansion of Bandar Seri Begawan on a more detailed basis.

Proposals for the enlargement of the Bandar Seri Begawan Municipal Area and for a Municipal Area at Muara have been prepared and approved by the Bandar Seri Begawan Municipal Board. They are now being considered by Government and it is hoped that they will be implemented in the near future.

With the increase in professional staff, it is becoming possible now to pay more attention to the planning of other towns. Schemes are being prepared for resettlement areas both at Kuala Belait and Seria to alleviate the growing squatter problem in these towns. A layout has been prepared for an extension to the proposed Industrial Area at Seria and this is being considered by the Municipal Board. Work has commenced on the preparation of a new Development Planning Scheme for Bangar, and work will shortly commence on a retail shopping survey at Seria and Kuala Belait.

Bandar Seri Begawan lacks a defined industrial area. A proposed Industrial area on a peri-urban site is to be re-appraised and an examination will also be made of alternative proposals and additional sites.

SOCIAL DEVELOPMENT

The Town and Country Planning Department is presently conducting a survey of the needs for Government Office space in Bandar Seri Begawan on both a short and long term basis.

Development Control

The Town and Country Planning Officer as a member of the Municipal Boards of Bandar Seri Begawan, Kuala Belait/Seria and Tutong has continued to advise the respective Boards on development control, land sub-division and other planning matters. Significant and useful progress continues to be made in respect of the control of land subdivision which is the most time consuming part of the Department's functions. The advice given is important and is helping to sort out some of the unfortunate land patterns of the past, and especially to provide adequate access to all plots. In some cases accurate comments are difficult because of lack of good information but this should be rectified when the new Subdivision Regulations come into force.

Proposals have been put forward for Development Control Areas at Bandar Seri Begawan/Muara, Kuala Belait, Tutong, Bangar and Lumut/Sungai Liang and are awaiting consideration and approval.

Advice is regularly given to all Departments of the Government on planning matters, in particular to the Lands Department on applications for changes of land use in the special conditions of land title and on proposals for access to land. A recent development is the giving of advice to the State Financial Officer on the sitting aspects of all applications for Government Housing Loans.

Landscaping

The scheme prepared for the night stalls area on Jalan Residency in Bandar Seri Begawan includes a complete landscape scheme. A landscaping scheme is also being prepared for the approach to the new airport. Advice has been sought by the Chairman of the Municipal Board of Bandar Seri Begawan on a programme for parks and gardens in the town and works on this will commence during 1973. It is to be hoped that consideration will be given to the creation of a Parks and Gardens organisation with nurseries, a well trained staff and a maintenance service to ensure the proper implementation of landscaping schemes.

Public Relations

Town and Country Planning is a service which controls all development and land use and promotes good development. It therefore affects the majority of land owners and in various ways affects all members of the community. As it is a co-ordinating service it is one to which people look for advice and information. There is a growing awareness of the existence of the Town and Country Planning Department, and an increasing number of people consult the Department over their development problems and schemes. As soon as the statutory planning becomes effective, it will be possible to give more publicity to Town and Country Planning. It is important for the public to know about development plans and other planning proposals and to be shown that the work being done is constructive and not just restrictive.

(d) SOCIAL WELFARE

As in previous years the department continues to give services in form of financial aid and also advice. However, the functions for the Department may be divided into 3 sections i.e. :-

- a) General Welfare
- b) Youth Services and
- c) Services through Youth Centre.

SOCIAL DEVELOPMENT

General Welfare

In this aspect the Social Welfare Department spent a sum of \$111,001.69 for giving monthly financial aid of those who are in need of assistance due to difficulty in daily livelihood in the absence or incapability of the head of the family or other helpers. They were investigated from time to time, and at least once in every three months. The department also provides spectacles, costing not more than \$25/- per pair. These who were in difficulty due to fire and such like are also given financial aid, and sometimes clothing. The department also helps to repair or build houses as far as possible. The contributions, however, is given only after thorough investigation has been made and the department has no doubt of the suffering of the families concerned.

In 1972, 248 persons were given assistance including 8 new recipients.

Youth Services

Two Officers were allotted this duty; Supervisor of Youth Association; and Youth Field Officer. They supervise Youth and Welfare Organisation, in the State by holding meetings in or outside the office in order to know the progress as well as the difficulties of the organisation or the association, and to give advice and guidance where necessary.

There are 116 registered organisations including two Student Association Aboard; 23 Sports Association and in 1972, 8 new associations were registered i.e. 5 Youth and Welfare Associations and 3 Sports Association. Six Associations and Welfare Organisation were still given annual contributions amounting to \$26,734.69.

The Department successfully conducted the Second Youth Leaders Discussion on 1st. December, 1972.

SOCIAL DEVELOPMENT

Services Through Youth Centre

The Youth Centre was officially opened on 20th December, 1969 and the service was conducted under the supervision of the Supervisor of Youth Centre. A Youth Centre Administration Board was appointed by Government for a period of one year to discuss on the administration, to give views, proposed, encouragement etc. for the proper conduct of the Youth Centre.

Various facilities are available in the Youth Centre, and various activities are progressing smoothly i.e. in the fields of sports such as badminton, table-tennis, etc. Judo/Karate, Taekwon-do and Boxing practices are being conducted by the respective associations. Youth Council conducted classes in dancing 'hadzrah' and 'gulin tangan'. Women Institute too is conducting cooking and sewing classes.

General Meetings and other meetings of sports, youth and welfare bodies are regularly held in the Youth Centre, and similarly the boys' and girls' hostels are most of the time being used by inside as well as outside the state which must be sponsored by any of the local organisation or association.

SOCIAL DEVELOPMENT

(e) PENSIONS

Payment of State Pensions Programme is in accordance with State Pensions Enactment 1954 (Enactment No. 10 of 1954) which came into force on 1st. January, 1955.

The State Pensions Enactment provides for:-

- (a) Old Age Pensions
- (b) Pensions for the blind including allowances for their dependants
- (c) Allowances for dependants of lepers during his treatment in a leper settlement or a place approved by the Director of Medical Services
- (d) Allowances for dependants of mental patients under the Lunatic Enactment, whether detained in a Mental Hospital or under the care of a relative or friend
- (e) Pensions for disabled persons
- (f) Similar pensions and allowances decided by the Sultan in Council in accordance with the rules under section 8 of the Enactment.

Payment of any pensions under (e) and (f) has not been enforced.

OLD AGE PENSIONS STATISTICS

<u>DISTRICT</u>	<u>PENSIONERS</u>	<u>TOTAL PAYMENT</u>
Brunel/Muara	2, 770	\$792,435.00
Belait	941	260,942.50
Tutong	1, 062	299,515.00
Temburong	259	74,750.00
<hr/>		
TOTAL:	5, 032	1,427,642.50
<hr/>		

SOCIAL DEVELOPMENT

Number of pensioners who died within the year	153 persons
Number of applicants rejected	64 persons
Number of successful appealed of Minister Council	2 persons
Number of persons examined by doctor	126 persons
Number of persons passing medical examination doctors and must reach the required age in 1972	419 persons

PENSIONS FOR THE BLIND AND ALLOWANCES FOR THEIR DEPENDANTS

<u>DISTRICT</u>	<u>NO. OF PERSONS</u>	<u>NO. OF DEPENDANTS</u>	<u>TOTAL PAYMENT</u>
Brunei/Muara	82	72	\$ 36,965.00
Belait	18	9	8,237.50
Tutong	18	7	6,475.00
Temburong	8	4	2,712.50
<hr/>			
TOTAL:	126	92	54,390.00

Number of blind pensioners who died within the year	2 persons
Number of persons rejected	1 person
Number of persons examined by doctors	8 persons
Number of persons passed the examination by doctors	8 persons

ALLOWANCES FOR DEPENDANTS OF PERSONS SUFFERING FROM HANSEN DISEASE

<u>DISTRICT</u>	<u>NO. OF PERSONS</u>	<u>NO. OF DEPENDANTS</u>	<u>TOTAL PAYMENT</u>
Brunei/Muara	-	-	-
Belait	2	10	\$ 750.00
Tutong	1	1	\$ 150.00
Temburong	-	-	-
<hr/>			
TOTAL:	3	11	\$ 900.00

SOCIAL DEVELOPMENT

ALLOWANCES FOR DEPENDANTS OF MENTAL PATIENTS

<u>DISTRICT</u>	<u>NO. OF PERSONS</u>	<u>NO. OF DEPENDANTS</u>	<u>TOTAL PAYMENT</u>
Brunei/Muara	5	18	\$ 4,350.00
Belait	3	11	1,550.00
Tutong	1	2	750.00
Temburong	-	-	-
<hr/>			
TOTAL:	9	31	6,650.00

TOTAL OF ALL PENSIONS AND ALLOWANCES

<u>Type of Pensions and Allowance</u>	<u>Pensioners</u>	<u>Dependants</u>	<u>Total Payment</u>
Old Age	5,032	-	\$1,427,642.00
Blind and Dependents	126	92	54,390.00
*Dependants of Lepers	3	11	900.00
*Dependants of Mental Patients	9	31	6,650.00
<hr/>			
TOTAL:	5,170	134	1,489,582.50

* Payable only to the dependants.

SOCIAL DEVELOPMENT

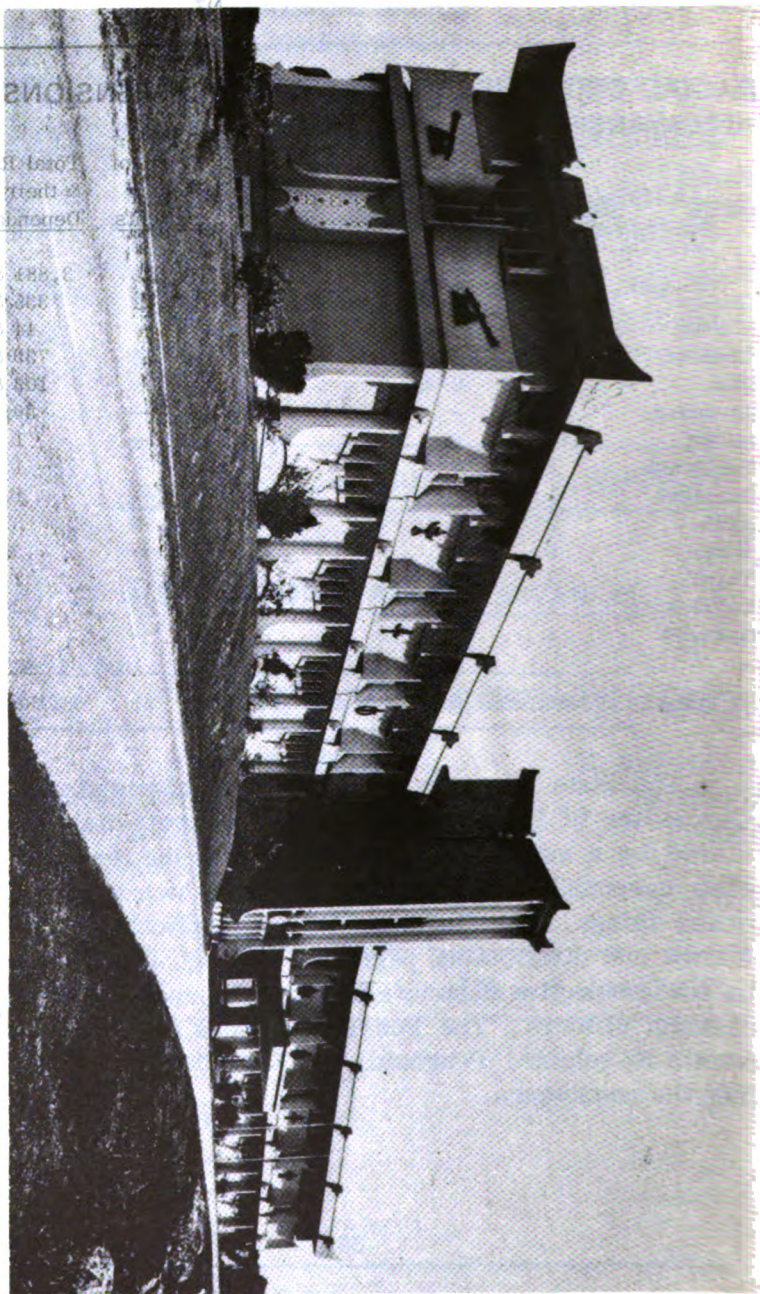
RACIAL GROUPINGS OF RECIPIENTS OF PENSIONS AND ALLOWANCES

<u>Racial Group</u>	<u>Old Age</u>	<u>Blind Persons and their Deps.</u>	<u>Deps. of Lepers</u>	<u>Deps. of Mental Patients</u>	<u>Total Races & their Total Dependants</u>
Malay	3,783	98 & 77	-	19	3,881 & 96
Musun	322	13 & 6	11	2	335 & 19
Murut	40	4 & 1	-	-	44 & 1
Chinese	732	7 & 7	-	10	739 & 17
Iban	99	4 & 1	-	-	103 & 1
Javanese	30	- -	-	-	30. -
Indian	11	- -	-	-	1 -
Pakistani	1	- -	-	-	1 -
Japanese	1	- -	-	-	1 -
Arab	3	- -	-	-	3 -
Punan	5	- -	-	-	5 -
Tagal	2	- -	-	-	2 -
Eurasian	2	- -	-	-	2 -
Kedazan	1	- -	-	-	1 -
<hr/>					
TOTAL:	5,032	126 92	11	31	5,158 & 134

The State Pensions Department is administered by the Controller of Pensions and the Deputy Controller who, assisted by a small number of officers at the Head Office, is also responsible for the routine work which involves among other things, investigating pension applications, preparing forms and distributing payments through Pensions officers in the respective districts under the supervision of the district officers. The Pension Officers hand over the payments to selected Penghulus and Kampong Ketuas who then pay the pensioners.

1. Total
 2. Total
 3. Total
 4. Total
 5. Total
 6. Total
 7. Total
 8. Total
 9. Total
 10. Total
 11. Total
 12. Total
 13. Total
 14. Total
 15. Total
 16. Total
 17. Total
 18. Total
 19. Total
 20. Total
 21. Total
 22. Total
 23. Total
 24. Total
 25. Total
 26. Total
 27. Total
 28. Total
 29. Total
 30. Total
 31. Total
 32. Total
 33. Total
 34. Total
 35. Total
 36. Total
 37. Total
 38. Total
 39. Total
 40. Total
 41. Total
 42. Total
 43. Total
 44. Total
 45. Total
 46. Total
 47. Total
 48. Total
 49. Total
 50. Total
 51. Total
 52. Total
 53. Total
 54. Total
 55. Total
 56. Total
 57. Total
 58. Total
 59. Total
 60. Total
 61. Total
 62. Total
 63. Total
 64. Total
 65. Total
 66. Total
 67. Total
 68. Total
 69. Total
 70. Total
 71. Total
 72. Total
 73. Total
 74. Total
 75. Total
 76. Total
 77. Total
 78. Total
 79. Total
 80. Total
 81. Total
 82. Total
 83. Total
 84. Total
 85. Total
 86. Total
 87. Total
 88. Total
 89. Total
 90. Total
 91. Total
 92. Total
 93. Total
 94. Total
 95. Total
 96. Total
 97. Total
 98. Total
 99. Total
 100. Total

The beautiful Brunel Museum - officially declared open by Her Majesty
 Queen Elizabeth the Second on 29th February, 1972.



SOCIAL DEVELOPMENT

(f) MUSEUM

GENERAL REVIEW

The year 1972 was the most historical year in the development of the Brunei Museum. During this year the official opening of the Brunei Museum was performed on 29th. February, 1972 by Her Majesty The Queen Elizabeth II, Queen of Great Britain and Ireland and attended by, among others His Highness the Sultan and Yang Di-Pertuan Sir Muda Hassanal Bolkiah, Her Highness the Raja Isteri, The Paduka Seri Begawan Sultan Sir Muda Omar Ali Saifuddin, His Royal Highness Prince Philips, Her Royal Highness Princess Anne, The Duli Pengiran Perdana Wazir Sahibul Wal-Waqar Pengiran Muda Mohammad Bolkiah, Yang Teramat Berhormat Pehin Orang Kaya Laila Setia Bakti Di-Raja Dato Laila Utama Awang Isa, General Adviser to His Highness the Sultan, and Yang Amat Mulia Pengiran Setia Negara Pengiran Haji Mohammad Yusof, Menteri Besar, Brunei. The official opening of the Brunei Museum was one of the most colourful ceremonies performed by Her Majesty during her official visit to Brunei that day. More than 1,000 special guests were present at the official opening.

Her Majesty Queen Elizabeth II accompanied by His Highness the Sultan were shown around guided by the Curator of the Brunei Museum, P.M. Shariffudin to see the interesting galleries. The exhibition galleries visited by Her Majesty were the first Exhibition Gallery showing Traps and Fishing equipments, the third Exhibition Gallery, the Brunei Natural History section, the forth Exhibition Gallery the section on Cultural Groups in Borneo and Sixth Exhibition Gallery showing the types of native houses in Brunei.

In a message from Her Majesty Queen Elizabeth II sent by Lord Mountbatten, to the Curator of the Brunei Museum, she stated that she was so impressed by the building and the exhibition in the Brunei Museum Exhibition. Her Majesty Queen was presented with a copper canon, a copper 'Kiri' to Princess Anne and an old Brunei sword to Prince Philips as souvenirs of the Royal visit to the Museum.

To commemorate the official Opening of the Brunei Museum, Department of Postal Services issued a First Day Cover with five different types of stamps of 10 cents, 12 cents, 15 cents, 25 cents and 50 cents denominations. The Stamps show the Museum building, collection of copper articles, as well as transport equipments and fishing equipments that are kept in the Museum. Apart from fact, another First Day Cover issued on which the stamps show the places visited by Her Majesty the Queen. These include the stamps that shows the Brunei Museum building.

The Shell Petroleum exhibition gallery which was put up and paid for by Brunei Shell Petroleum Company Limited was completed and presented to the Curator of the Museum on 1st. July, 1972. This exhibition was not opened during the official opening of the Brunei Museum on 29th February, 1972. From that date the Brunei Museum received the exhibition and during the fixing, with responsibility for general supervision, maintenance and servicing of the exhibition gallery. The exhibition was opened to the public since then.

SOCIAL DEVELOPMENT

ADMINISTRATION

Although the year was the year of development of the Brunei Museum, the vote provided was less than last year. The number of officers was not increased. The following table indicates:-

	1972	1971
Number of staff	52	52
Total Personnel Emoluments	\$251,735	\$230,840
Total other expenditure	\$155,800	\$168,800
Total Museum	\$491,535	\$519,290

During the year 10 appointment were filled i.e. :-

- 1 Conservation Officer
- 1 Assistant Taxidermist
- 1 Collector
- 1 Cleaner
- 1 Gallery Attendant

Ak. Hashim bin Pg. Md. Jadid who was appointed as a Conservation Officer from 1st. April, 1972 is a graduate of the Canterbury College of Arts, England with a Diploma, Dip. A.D. (Graphic Design) Second Class Honours.

SOCIAL DEVELOPMENT

Awang Jaya bin Sahat, returns from a course in England at the end of November. There he was trained at the Glasgow Museum and the British Museum (Natural History section). He was trained in the field of exhibition and maintenance of animal life. He was appointed as Assistant Natural History and Zoology Officer. Awang Lim Jock Seng, B.Sc., Assistant Curator left for London in June. He was attached to the British Museum, Anthropology section for practical training in preparation for the Museum Association Diploma Examination. He is expected to return at the end of 1973.

During the year a total of \$40,000.00 was allocated for the construction of a Canteen within the premises of the Brunei Museum. It was proposed to build the canteen on a small hill opposite the Brunei Museum. The beautiful scenery from this Canteen will draw the interest of the visitors who come to the Brunei Museum. The construction of the canteen may be started next year.

LIBRARY AND ARCHIVES

This year the allocation for the Library and the Archives of the Museum is as follows:

	1972	1971
Purchase of Books	5,000	-
Magazine Subscriptions	1,500	1,500
Purchase of Back Dated		
Journals and Magazines	6,000	10,000

At present, the Library section has a total of 2,384 books. As the library is a library, the subject matter is restricted to a few section closely related with museum such as South-East Asian History, Anthropology, Biology, Traditional Pottery and Crochery and Sociology.

SOCIAL DEVELOPMENT

This Library also subscribes to about 40 academic magazines which are related to museum work. Besides there are several magazines supplemented by exchange with books published by Brunei Museum.

Until the end of the year 1972, the Archives section has 665 books on Borneo. Seven editions of newspapers are regularly received for the archives. The newspapers are:-

1. Pelita Brunei
2. Borneo Bulletin
3. Straits Times
4. Berita Harian
5. Sarawak Tribune
6. Daily Express
7. Kinabalu Sabah Times

Four reels of Microfilm were processed at the Survey Department, Bandar Seri Begawan.

Publications

The year showed an increase in the number of publications produced by the Brunei Museum. Besides the souvenir books of the Official Opening of the Brunei Museum, the seven books published were:-

1. Brunei Museum Journal
2. Brunei Museum Report 1965 - 70
3. Brief History of Brunei State Flags
4. Guide to Gallery No. 3
5. Guide to Gallery No. 4
6. Guide to Gallery No. 5
7. Guide to Gallery No. 6

Many of the books published were sent as a present and exchange with Museum Institutes and other arts bodies out-

SOCIAL DEVELOPMENT

side the state. Annual publication, Journal of Brunei Museum published since 1969 has a good market. The method of exchange of the Journal with foreign magazines, enables the Brunei Museum to Collect valuable academic magazines for the Archives

This year a total of 1,200 offprints were printed from all the twelve articles contained in the Brunei Museum Journal 1972; The writers of the articles were given 25 offprints from their respective articles as compensation.

Until the end of the year a total of \$12,531.00 were collected from the sales of the various books printed by the Brunei Museum. This included the sale of journals printed in the previous year. The table below shows the statistic of the printed books:

Name of Books	Total Printed	Number issued	Number sold	Income from Sales - \$
Brunei Museum Journal Vol. 2 No. 4	3,000	496	91	910.00
Brunei Museum Report 1965 - 1970	5,000	1,603	1,410	2,115.00
Brief History of Flags State of Brunei	3,000	1,163	968	968.00
Guide to Gallery No. 3	5,000	964	765	765.00

SOCIAL DEVELOPMENT

Guide to Gallery No. 4.	5,000	957	754	754.00
Guide to Gallery No. 5	5,000	975	776	776.00
Guide to Gallery No. 6	5,000	980	779	778.00
<hr/>				
Total	31,000	7,138	5,543	7,067.00

Schedule of books printed and sold in 1972

The Brunei Museum also sold 12 types of Annual Report books of the State of Brunei sent to the Department of Brocasting and Information. The Annual Report books sold were for the years 1958, 1959, 1960, 1961-62, 1963, 1964, 1965, 1967, 1968, 1969 and 1970. Some of the Annual Report books were presented and exchanged with other magazines or books. This depends on the requirements of the Curator of the Museum as directed by the State Secretary Brunei.

PURCHASE EXCHANGE AND GIFT OF SAMPLE ARTICLES

Although this year the Brunei Museum did not collect valuable specimens as in the previous years, some interesting collections were found this year. Early this year the Brunei Museum sucessfully brought an old weaver complete with its equipment. This weaver has been exhibited in the Brunei Museum, Gallery No. 4.

The Brunei Museum also received six paintings from e Director of the Language and Literature Bureau. The paintings are potraits of His Highnessthe Sultan and Yang

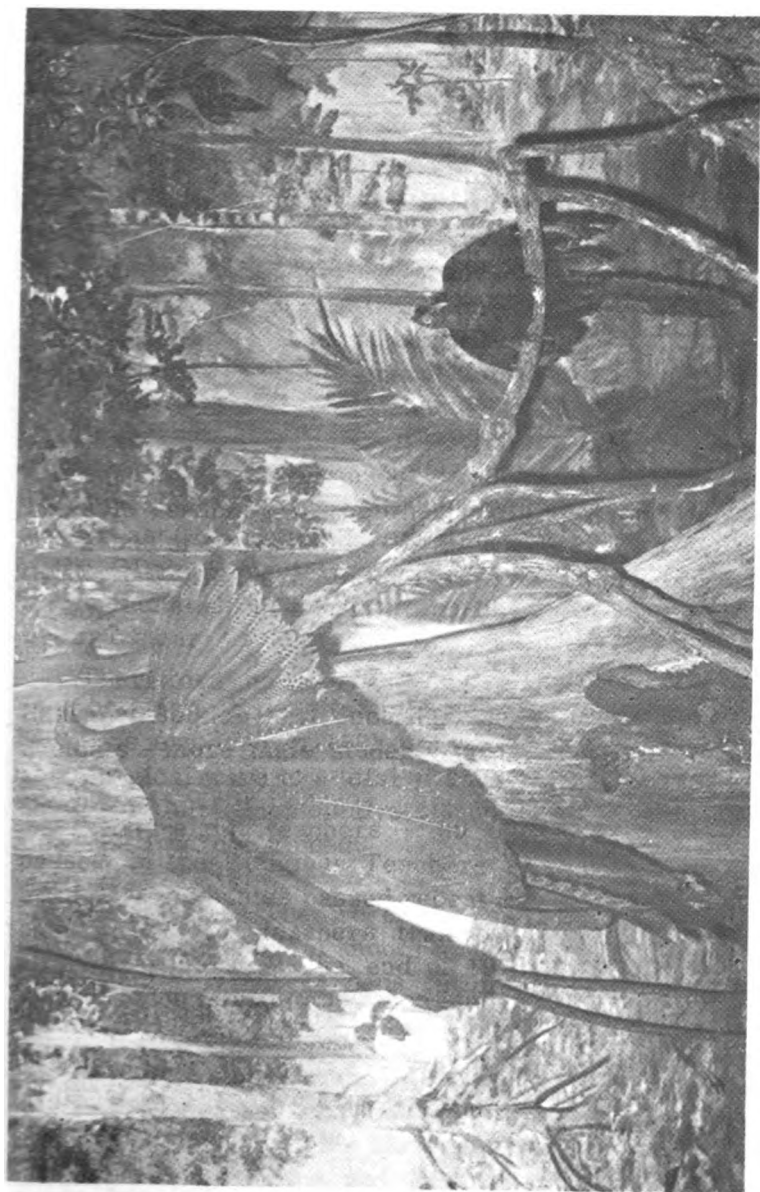
SOCIAL DEVELOPMENT

Di-Pertuan; Her Majesty Queen Elizabeth II, Her Highness the Raja Isteri, Duli Yang Teramat Mulia Paduka Seri Begawan Sultan, His Royal Highness Prince Philips Duke of Edinburgh and the portrait of Princess Anne. 'The Museum also receives six pieces of paper currency presented by the Brunei Currency Board.

This year 14 persons presented various samples of the Brunei Museum to be kept. A sum of \$26,451.00 (Dollars twenty-six thousands four hundred and fifty one only) from the Brunei Museum vote was spent throughout the year for buying samples.

Types of samples obtained this year may be divided as follows:

Types of samples	Total Collections
Copper cannon	8
Other copper articles	23
Pottery	16
Clothes and decorations	58
Weaver	1
Paintings	6
Currencies	11
Jades and tusks	18
Weapons	5
Others	12
Total	158



One of the many life like exhibits at the Museum.

SOCIAL DEVELOPMENT

VISIT TO MUSEUM AND OTHER ACTIVITIES

Since the Brunei Museum was opened to the public on 15th. March, 1972, after the official opening on 29th. February, 1972, a total of 104,895 persons have visited the museum until the end of the year. This number can certainly be counted as many and shows that the Brunei Museum has attracted public interest.

The number was not only compared of the people of this state but there were 1086 persons from thirty countries who visited the Brunei Museum throughout the year, such as from Malaysia, Singapore, England, and United State of America, forming the majority.

The schedule below shows a list of foreign visitors who have visited the Brunei Museum throughout the year 1972.

NO	COUNTRY	TOTAL OF VISITORS
<hr/>		
1.	AUSTRALIA	29
2.	BELGIUM	2
3.	CZEKOSLAVAKIA	1
4.	DENMARK	3
5.	ENGLAND	70
6.	FRANCE	5
7.	WEST GERMANY	6
8.	HAWAII	1
9.	HONGKONG	24
10.	INDIA	3
11.	IRELAND	1
12.	ITALY	7
13.	JAPAN	4
14.	SOUTH KOREA	4

SOCIAL DEVELOPMENT

15.	MALAYSIA	704
16.	NETHERLANDS	13
17.	NEW GUINEA	1
18.	NEW ZEALAND	24
19.	PHILIPPINES	14
20.	RHODESIA	1
21.	SCOTLAND	4
22.	SINGAPORE	87
23.	SOUTH VIETNAM	2
24.	SPAIN	2
25.	SWEDEN	3
26.	SWITZERLAND	4
27.	TAIWAN	4
28.	THAILAND	3
29.	UNITED STATES OF AMERICA	50

TOTAL - 1,086

More than 3,000 students, police recruits and Members of Association also visited the Brunei Museum throughout the year. These were groups of students who sent notice to the Curator Museum requesting for a guide and lectures on the work of museum. The groups of students who visited privately were not recorded.

Apart from lectures given to the students in the lecture room of the Museum, Senior Officers of the Museum also gave lectures on administration and the work of Museum in the Police Training Centre, Jalan Muara.

Dr. Donald E. Brown, Assistant Professor at the University of California, Santa Barbara, United States, made a short visit to the Museum. He is the Author of the "Brunei - the Structure and History of a Bornean Malay Sultanate", which is a product of his social study in Brunei in 1967 - 1968.

SOCIAL DEVELOPMENT

Dayang Linda Kimball obtained her doctorate degree from the Ohio State University Columbus, Ohio, United States. She is a lecturer in the University Kebangsaan, Kuala Lumpur, Malaysia on Fulbright Hayes Exchange of Senior Lecturers. Dayang Kimball has made a study on the life of children in Temburong for about $1\frac{1}{2}$ years as a thesis for her doctorate degree.

Professor wolfgang Franke, from the University of Hamburg, West Germany and Professor Chen Tien Fan from the University of Malay, Kuala Lumpur, Malaysia conducted a study in May, of a Chinese tombstone found at Tutong Road cemetery. The tombstone was studied and certified to date in the 12th Century, making it the oldest tombstone ever found in South-East Asia. A statement on the tombstone has been issued.

In June, 1972, three zoology students from Oxford University, England, made a study and photographic films in Brunei on Proboscis Monkey. There are :

1. David Mc Donald
2. Mark Collins
3. Andrew Neighbour

The study and photographic film were commence by British Broadcasting Corporation with the cooperation of the Oxford University. The result of the filming, as stated later as satisfactory and encouraging; further corporation and exchange of study will be carried out later. A copy of the film and other matters related with natured history will be kept in the Museum. Mr. David attenborough, Director of BBC Programme, was in Brunei to make a film on the same animal.

SOCIAL DEVELOPMENT

This year several important historical areas and places, and useful for natural history have been reserved under the authority of the Commissioner of Land. The places are part of Pulau Muara Besar, Pulau Pilongan, Tasek Merimbun, Lumut Lunting, Jong Baru, Pulau Kain-garan and Pulau Badukang. Although the Curator of Museum was unable to declare these places as historical areas and notice according to Antiquities and Treasure Trove Enactment, 1967, the Commissioner of Land gave an assurance that the areas will definitely be made State land and will not be interfered with by any authorities whatever.

(g) LANGUAGE AND LITERATURE BUREAU

Activities for the implementation of policies of the Bureau under section 82(1) of the Brunei Constitution 1959 were carried out smoothly and conscientiously throughout the year 1972. As the main task of the Bureau was to improve the quality and enhance the status of the Malay language and to widen its use among the general public, activities were directed towards the publication of books and magazines, propagation of the language in Government departments and Commercial and Industrial firms and the extension of library activities and services. Of no less importance were activities in the field of Research, Translation, Terminology, Etymology and Art which represent important fields in the overall development of the Malay language.

As in the work of other arts the field of language also requires experts or at least trained or experienced officers. The absence of experts and text book writers was very much felt by the Bureau and this somewhat affected the work of the Bureau especially in the field of publication of books and magazines.

SOCIAL DEVELOPMENT

The position and achievement of each section at the end of 1972 were as follows:-

2. **Staff Section :**

The Vote allocated for 1972 to this department was \$493,950.00 for a staff 84 including 3 new staffs. Salaries paid to 74 staffs totaled \$409,712.45. The department was able to fill only 6 vacancies, 4 of which were filled by serving officers who were promoted. By the end of the year, the department still had 10 vacancies.

(a) **Collection of Revenue :**

From the vote of \$200,000.00 allocated to sub-head Printing of Books and Magazines, a sum of \$57,645.45 was spent. A total of \$16,897.00 was transferred from the sub-head to Sub-head S. 26/10 - Sundry Labour due to shortage. Revenue collected from the sale of books and magazines amounted to \$21,662.66.

(b) **Training :**

In 1972, the department sent 3 staffs overseas to attend Courses in their respective fields. Awang Sawal bin Rajab and Awang Kiflee bin Tārsat attended courses in librarianship in the National Library, Singapore, while Awang Muslim bin Haji Burut attended a course in book production in the University of London Institute of Education for a year.

3. **Publication Section :**

(a) **Magazines :**

The following quarterly magazines are regular publications of the bureau :-

SOCIAL DEVELOPMENT

- i. BAHANA - in the form of cultural literature;
- ii. MEKAR - for children's reading; and
- iii. BERIGA - in the form of general knowledge and academic.

As was the case last year, the magazine BERIGA was not published due to difficulty in finding suitable and original materials. In the last publication of the magazine, most of the content were translated materials. The ultimate aim of publishing the magazine is to insert original materials which are related to the national development.

(b) **Books**

Books published during the year were as follows:

- (i) "Menjelajah Sains" - Book V
- (ii) "Kumpulan Titah Kebawah Duli Yang Maha Mulia Paduka Seri Baginda Maulana Al-Sultan Sir Omar Ali Saifuddin Sa'adul Khairi Waddin - 1959 - 67"
- (iii) "Chatatan Sejarah Perwira2 Dan Pembesar2 Brunei" Vol. I

Books which have been checked and which are expected to be published in 1973 are as follows :

- (i) "Chatatan Sejarah Perwira2 Dan Pembesar2 Brunei" Vol. II
- (ii) "Sains dari Permulaan" - Book I
- (iii) "Menjelajah Sains" - Book VI
- (iv) "Pokok Tinggi Di-atas Bukit" (anthology of short stories for children)

SOCIAL DEVELOPMENT

- (v) "Si-Puteh dan lain2 Cherita" (anthology of short stories for children)
- (vi) "Buku Tatara'ayat" - Books I, II, III.

Books which are still in the preparation/checking stage are as follows:

- (i) "Buku Tatara'ayat" - Book IV
- (ii) "Sains dari Permulaan" - Books II - IV
- (iii) "Panduan Guru" - Book I & II (teachers' notes for the "Menjelajah Sains" series).
- (iv) "Ilmu Alam untuk Sekolah Rendah"
- (v) "Peribahasa Sekolah Rendah" - Books I, II, III, IV
- (vi) "Ikhtisar Budaya Brunei"
- (vii) "Perbendaharaan-kata Melayu Brunei"
- (viii) "Kamus Kanak2"
- (ix) "Kamus Ekonomi"
- (x) "Cherpen Dewasa"

4. Translation Section :

As with last year, his section still had four staffs i.e. one Senior Translator and three Translators. One translator dealt with Malay/Japanese/Malay translation. In the middle of October, a temporary translator started work in this section. The three vacancies in this section had not been filled due to the non-availability of suitably qualified applicants to meet the quality of translation required by the department.

SOCIAL DEVELOPMENT

Apart from translating materials such as receipts, forms, letters and memoranda for the department's use or for other Government Departments, this section translated the following books:

- (a) Outlook series - 6 series
- (b) Creative Woodwork
- (c) Teachers' Notes (For use with Menjelajah Sains I, II and III)
- (d) My House series - 31 series
- (e) They Were First - 12 series

5. Terminology Section :

Throughout 1972 the work in this section ran smoothly. The section completed the checking of the following terminology:

- (a) Physics and Mathematics
- (b) The Arts
- (c) Administration and Management
- (d) Agriculture
- (e) Medicine
- (f) History
- (g) Sociology and Anthropology
- (h) Religion

Reference cards for terms used in the department's publication had been partly compiled and totaled 733. This section was directed to officiate the Shops/Companies Names Committee and by the end of the year had held 45 meetings. In addition, this section was also asked to check the terms used in translations, and further helped in translating forms and agreements. The list for Police/Military Terminology is being checked by this section.

SOCIAL DEVELOPMENT

6. Etymology Section :

Projects mentioned in the 1971 report were continued and implemented this year. The projects were :

(a) Brunei Malay Dictionary

The draft for the dictionary was checked by a committee which held forty meetings in 1972 and completed checking words up to the alphabet J. All the words passed were published in the Bahana magazine under the heading 'Brunei Malay Vocabulary'. When all the alphabets are completed, the words will be published in book form.

(b) Children's Dictionary

The draft for the dictionary was checked this year by a committee. The committee had checked words up to alphabet B.

(c) Economic Dictionary

This is a dictionary translated from English. Nearly half had been translated so far.

(d) Geographical Dictionary

This was planned this year for used secondary schools. The draft for the text is expected to be completed early next year.

7. Research Section :

The work done by this section was a continuation of the work mentioned in the 1971 report. The draft for the book

SOCIAL DEVELOPMENT

on Sejarah Rendah Brunei was completed and will be discussed early in 1972. The collection of recordings, microfilms, old manuscripts and photos was carried out as usual.

8. Library Section :

SERVICES

The DBPL continues to play a crucial role in support of the educational, spiritual, social and economic development of the country.

The Library is open to the public from 8.00 o'clock in the morning to 8.00 o'clock in the evening from Monday to Thursday and Saturday. On Sunday, it is open from 9.00 o'clock in the morning to 8.00 o'clock in the evening. It is opened to the public for a total of 71 hours a week. The evening hours per week total 24, and on Sunday it is open for 11 hours.

ATTENDANCE

In 1972, a total of 83,137 people used the services of the library. Of this number, 60,309 were adults and 22,828 were children. The table below shows the public attendance to the Dewan Bahasa dan Pustaka Library.

Table 1. COMPARATIVE ATTENDANCE

	1970	1971	1972
Adults	58312	61651	60309
Children	20518	26079	22828

SOCIAL DEVELOPMENT

Total	78830	87730	83137
--------------	--------------	--------------	--------------

Attendance in 1972 as shown above had decreased a little from the 1971 figure. This was due to the fact that in 1972 the Library had lent out books for home-reading. So, those readers who borrowed books for home-reading did not come to read in the Library.

HOME READING SERVICES

In 1972 the Library lent out 11,787 volumes for home-reading to 675 library members. Of these members, 11 had sent in their withdrawal from membership because they had left the country. The table below shows the books borrowed for home-reading according to grouping.

Table 2 . BOOKS BORROWED FOR HOME-READING

Grouping	Subject	Quantity
000	General literary work	38 Volumes
100	Philosophy	327 "
200	Religion	554 "
300	Social Science	1015 "
400	Languages	482 "
500	Pure Science	1950 "
600	Technology	793 "
700	Fine Arts	242 "
800	Literature	419 "
900	History and Geography	1359 "
...	Novel	4608 "

SOCIAL DEVELOPMENT

TOTAL

11787 Volumes

SOUTH-EAST ASIA AND REFERENCE LIBRARY

At the Churchill Memorial Building, a place was allocated for use as reference library having reference books for advance level. The library was named Perpustakaan Dato Ibrahim and has books on South-east Asia, literary work by and on Winston Churchill, and technical and professional periodicals. This section is opened to students and researchers and is open daily from 8.30 a.m. to 12.00 noon and from 1.30 p.m. to 4.00 p.m. except on Friday and Sunday. The number of readers who made use of the services offered by the Perpustakaan Dato Ibrahim in 1972 was 4139.

BIBLIOGRAPHICAL SERVICES

To make known the Library's newly acquired materials, 1,800 copies of bibliographical containing both Malay and English new book titles were printed and distributed to schools and colleges, government departments and youth organisations throughout the state.

IN-SERVICE TRAINING

Six Government servants were given theoretical and practical training in librarianship by the Library's staff during the year 1972.

LIBRARY ORIENTATION

Six groups of local and outside youths and primary and

SOCIAL DEVELOPMENT

secondary students from various schools visited the library. During these visits a brief lecture on how to use the library and resources was given the visitors.

Two groups from the Police Training Centre came for library orientation this year.

THE DBP'S MOBILE LIBRARY

The DBP's Mobile Library had 6 centres and served two hours a week at each centre. The number of attendance by members and the general public to the Mobile Library totaled 6931. Of this number, 4410 were adults and 2521 were children (see Table 3). The Mobile Library's members now stands at 265. Books lent out for home-reading totaled 3427 volumes (see Table 4).

Table 3. **The DBP'S Mobile Library**

Centres	Adults	Children	Total
Kuala Belait	2262	1398	3660
Seria	731	255	986
Tutong	697	293	990
Sengkurong	118	150	268
Muara	249	135	384
Kampong Perpindahan	353	290	643
Total	4410	2521	6931

Table 4. **Books borrowed for home- reading
According to grouping**

SOCIAL DEVELOPMENT

Grouping	Subject	Quantity
000	General Literary Work	4 Volumes
100	Philosophy	12 "
200	Religion	78 "
300	Social Science	196 "
400	Languages	150 "
500	Pure Science	370 "
600	Technology	34 "
700	Fine Arts	9 "
800	Literature	158 "
900	History and Ilmu Alam	354 "
...	Novel	2062 "
Total		3427 Volumes

THE DBPL BOOK COLLECTION

Up to the end of 1972, the number of books in the library's possession totaled 45080 volumes. Below is the number for each section:-

Section	Quantity
Adult	31121 Volumes
Children	6958 "
Mobile	5841 "
Dato Ibrahim	1260 "

SOCIAL DEVELOPMENT

Total	45080 Volumes
-------	---------------

Of this number, 24742 volumes were English books, 20076 Malay and 262 other languages. Table 5 shows the comparative distribution of the book collection by language and section.

Table 5. **COMPARATIVE DISTRIBUTION OF BOOKS
BY LANGUAGE AND SECTION**

Section	Malay	English	Other Languages	Total
Reference	2124	4718	-	6842
Fiction	4856	2674	-	7530
Non-fiction	8993	12659	-	21652
Children's Library	3180	3778	-	6958
Not yet processed	923	913	262	2098
Total	20076	24742	262	45080

PERIODICAL COLLECTION

The DBPL subscribed to 145 different magazines and newspapers. Table 6 shows the number of magazines and newspapers concerned.

Table 6. **SUBSCRIPTION OF MAGAZINES AND
NEWSPAPERS**

SOCIAL DEVELOPMENT

Language	Magazines	Newspapers	Total
English	119	7	126
Malay	15	3	18
German	1	-	1
Total	135	10	145

LANGUAGE PROPAGATION SECTION:

In general, activities carried out throughout 1972 were a continuance of the activities of the previous years. Among the activities carried out were :

1. CIVIC STORY WRITING COMPETITION

The Civic Story Writing Completion for use in Standard IV was organised in late 1971 and the result was announced in early 1972. A prize presenting ceremony to winners was held on 31st March, 1972 at the Dewan Bahasa dan Pustaka, Brunei. Three winning prizes and five consolation prizes were given. Prizes were in the form of money apart from certificates. The winners and the prizes given are as follows:

Winner

First	:	Awang Abu Bakar bin Osman	- \$300.00
Second	:	Dayang Norsiah bte Abd. Gapar	- \$250.00
Third	:	Awang Ahmad bin Mohd. Arshad	- \$200.00

SOCIAL DEVELOPMENT

Consolation

Awang Mohd. Salleh Abd. Latiff	- \$100.00
Awang Hussain Damit	- \$100.00
Ak. Aji Pg. Mohd. Tahir	- \$100.00
Awang Bakir Hj. Tengah	- \$100.00
Awang Abd. Rahman Mohd. Yusof	- \$100.00

EDITING

Stories which won the first, second and third prizes are still being edited and it is hoped that they will be published by late 1973.

QUALITY

Generally, the standard or quality of the stories submitted were not very satisfactory but could be considered to have met the organisers expectations. The main aim of the competition, apart from to increase the number of school reading materials, was to train and give opportunity to local authors to show their talents. Since the stories submitted required correction/improvement, a committee was set up to edit them.

2. SHORT STORIES FOR CHILDREN/ADULTS COMPETITION

1 SHORT STORIES FOR CHILDREN

The editing process of Short Stories for Adults was started in August 1972 and is expected to be completed at the end of the year. Both categories of short stories were edited by a committee.

3. TRANSLATIONS OF BUSINESS NAMES

During the year, a total of 292 Business Names were translated into Malay. A total of 529 Business Names were issued to the Managers concerned and 123 names were issued to vehicles.

Presently, the percentages of SIGNBOARDS written in Malay are estimated as follows :

Bandar Seri Begawan	80%
Tutong Town	95%
Muara Town	95%
Seria/Belait	20%
Bangar, Temburong	10%

The body responsible for dealing with the translations is a special committee officiated together by officers in the Terminology and Language Propagation sections.

4. MEETINGS

A number of meetings were held with a Managers of Business Firms to clarify certain aspects on the implementation of Bahasa Melayu. The managers were particularly asked to give their cooperation in using the Malay language in :

- Signboards
- Notice boards
- Letter heads
- Bills
- Receipts
- Forms
- Correspondence

SOCIAL DEVELOPMENT

Advertisement

Cheap Sale Signs

Daily Conversation

The priority of the use of Bahasa Melayu and the Jawi Script was also stressed to the Shop Proprietors. The priority meant is : To place the Malay version on top, the size of which should be at least twice that of other languages. The jawi script was recommended to be used on Signboards, notice boards, letter heads, bills, receipts etc. while for other purposes the Romanised Malay may be used. However, the use of the Jawi Script for any purpose is greatly appreciated.

The meetings held were :

- i. **Individually** - the arrangement was for officer from this Department to go and meet the managers concerned or vice versa.
- ii. **In groups**- the managers were called to the Department in separate groups.
- iii. meetings with hotel managers - meetings with Hotel Managers (Brunei Hotel, Puspa, and the Capital Hostel) particularly stressed the use of the Malay language in all aspects and in more effective ways. This is to safeguard the image of the Government of Brunei in the eyes of tourists. So far, it seems that some of the hotels had made the necessary steps towards the implementation of the directives.

5. THE USE OF BAHASA MELAYU IN GOVERNMENT DEPARTMENTS

This Department fully realises that it is underirable to

SOCIAL DEVELOPMENT

repeatedly remind other Departments regarding their failure to use the Malay language in correspondence, circulars, forms etc.. However, since the Department is responsible in maintaining and honouring the status of the Malay language as the official language, it has no alternative but to remind the other departments of their responsibility.

Every reminder issued by this department pointed out to the responsibility of every Government department to honour the Constitution of Brunei and State Secretariat's Circulars Nos: 8/1960, 59/1960, 9/1962, 43/1963, 52/1963 and 26/1965. There are still a great number of forms, correspondence and the like which have not used the Malay language.

To rid the departments concerned of the responsibility of translating their forms into Malay, this Department offered to give cooperation in doing the translations for them.

6. THE BUREAU'S SIGNBOARDS

Four new Signboards were made to replace old ones which have been damaged. These new signs were erected in Bandar Seri Begawan. The words written on them were "Bahasa Melayu Bahasa Rasmi Negara" in both Roman and the Jawi Scripts.

SOCIAL DEVELOPMENT

(h) RELIGIOUS AFFAIRS

1. introduction :

The year 1972 was a period of "programme consolidation" especially in the field of education and teaching of religion while the year before (1971) was a year of "introducing the programme" whereby a number of rules were made for implementation in the year 1972. Therefore, in many aspects of "consolidation" it did not involve any change in officers and finance except the normal allocation, but many promotions especially from Group V to Group IV were made in 1972 especially for local religious teachers.

2. Development in 1972

Administration:

The Administration section was established as a basis for Religious Affairs Department commencing from 1954 and the centre of Religious Affairs Department. Therefore, its function is "central coordination" of the work of the office and district offices. Functions and programmes given were directly carried out by the respective sections with the administration supervising and carrying out the daily routine work.

Total number of officers and staff of Religious Affairs Department in the programme for 1972 was 1,212 (compared to 1,225 in 1971), out of this total 803 were filled (816 in 1971). Out of this total more than 500 (62%) were officers in Group IV more than 200 (25%) in Group, and this includes the posts of 35 Imams, 8 Khatibs, 26 Bilals and Mudims, and 18 Merbuts "selection" of whom was first submitted to the Muslim Council. The shortage of 13 staffs were due to

SOCIAL DEVELOPMENT

resignation, retirement and non-renewal of contract. In additions 143 posts were on dally pay (in 1971 - 149 employees). On the whole the shortage and increase of officers was not a major problem for the Religious Affairs Department.

The Pilgrimage Matters were under the control of the administration section. Head of Religious Affairs was the Chairman of the Pilgrim Association Committee and the Secretary of Religious Affairs was the Deputy Chairman, and the Pilgrimage Officer was the Secretary. The total number of pilgrims in 1971 was 363 (in the year of 1971-239 pilgrims) out of this total 47 persons travelled by ship and 316 persons by plane. Pilgrim brokers were limited by Government to two persons in order to solve various important problems.

Muslim Religious Council

Members of Muslim Religious Council and its committees remained the same as last year and the period of appointment of all members will expire next year (1973).

Throughout the year 8 meetings were held. The Legal and Judicial Committee did not hold any meeting throughout the year.

The Council contributed a sum of \$10,302.55 (\$8,001.20 in 1971) for the maintenance of mosques and a sum of \$33,551.76 (\$25,207.09 in 1971) for construction of four new mosques, one in Brunei-Muara District and three in Tutong District, i.e. to replace the old mosques which were no longer useable.

SOCIAL DEVELOPMENT

Revenue from Public Administration (1971) i.e. revenue from the Court, individuals and unclaimed properties amounted to \$173,934.73 (an increase of \$36,751.64 from that of 1971).

Collection of 'Zakat' and 'Fitrah' amounted to \$90,679.94 (1971 - \$92,590.53 $\frac{1}{2}$). Similarly the zakat collection in rice decreased to 515 katis and 9 tahils (1970 - 937 katis and tahils). However the collection of 'zakat padi' increased to 4,047 $\frac{3}{4}$ gantangs (1970 - 3,070 $\frac{1}{2}$ gantangs). Out of this total, the amount distributed to the entitled "Asnaf" other than appointed "Amils" was \$30,722.74 in cash, 181 katis and 6 tahils of rice and 1,349 gantangs of padi. Distribution to 'amils' amounted to \$15,137.20 in cash, 77 katis and 7 tahils of rice and 678 gantangs of padi. The balance of the collection was retained by the Council.

There were 46 pieces of "Baitol Mal" land obtained from properties that were not completely distributed. This was in addition to the pieces of bequeathed land which were looked after by the Council.

The Chief Kadzi and District Kadzi's Courts dealt with cases under Enactment No 20 of 1955 as stated in Appendix (H) .

The total number of marriages in the State was 106 (1971 - 54) and Reconciliation - 5 (1971 - 5). The percentage of divorces in Brunei for 1972 decreased by 2% from that of 1971 which was 10%.

The total number of persons of various races who embraced the Religion of Islam was 113 (1971 only 63) i.e . 58 male and 55 female.

SOCIAL DEVELOPMENT

The office of Pehin Datu Seri Maharaja issued 41 rulings (fatwa) approving 74 publications for censoring, 13 religious problems (Radio) and preparing 20 prayers (do'a) for various official functions. These rulings have not yet published for distribution to the general public.

There were 50 mosques in Brunei, one new mosque planned for 1971 was built in Selangan - 4 mosques were rebuilt with the assistance of the Council and 11 mosques were repaired; all of them under the control of the Council whether Government Mosques or Kampong Mosques.

Religious Education

On the whole the programme planned for 1971 were implemented. Seri Begawan Religious Teachers' College commenced courses in early January, 30 selected from student religious teachers with L.C.E. (SRP) qualification commenced their course under one Principal, 2 Religious Officers, 5 assistant lecturers, one special religious teacher and several part-time lecturers. In July 30 more students were recruited from SPM/MCE or SAP certificate holders. The total number of students in 1972 was 60 i.e. 22 male and 38 female.

Special Form IV class proposed at Hassanal Bolkiah Arab Secondary School was started with 15 students. Preparation of Education Syllabus was carried out satisfactorily and smoothly. Rules for Religious Education Certificate Examination Board at the end of 1972.

As a result of discussions in the 1971 Council 8 Malay schools in Bandar Seri Begawan commenced religious education in Standard I in 1972. Eight teachers were sent to teach at those schools under overall supervision of

SOCIAL DEVELOPMENT

Visiting Inspectors to supervise its progress, and a report will be submitted by the Visiting Inspectors in 1973.

The number of overseas scholarships granted in 1971 was encouraging in respect of quality. The total was 80 (1971 - 83). Out of the total 10 students were Kebangsaan, Malaysia (same as in 1971) 3 students at the Azhar University. In 1972 a candidate from the Religious Department returned to the country with a degree in Islamic Law (Azhar) and Diplom in Education (Ains Shans University). One students passed B.A. Islamic Law (has not returned to the country).

There were 82 Religious Schools in the whole state. The Schools were in the Malay or English school buildings. The plan for building separate in a number of places in the towns was receiving attention and in the process of preparation. At present only 5 buildings were used as religious schools, two of which belong to kampong people.

The total number of students was 7,851, i.e. 3,393 male on the whole co-education classes. The number of teachers was 306 (as at December, 1972) (1971 - 354). The decrease was due to students teachers who jointed the Seri Begawan Religious Teachers' Colleges, teachers who resigned, whose services were terminated and those who did not renew their contract. The total number of all teachers including the above and religious teachers in Malay and English schools was 393 persons (with the 30 joining the Religious Teachers' College making a total of 423 persons compared to 426 in 1971). Out of this total 232 female teachers exceeded male teachers who numbered 161 persons. At the end of the year there were only 55 students teachers. These will join the Seri Begawan Religious Teachers' College for 3 years in 1973.

The percentage of passes in the Lower Religious School certificate examination was lower than that of 1971. Out of 292 candidates only 183 candidates passed (in 1971, out of 243 candidates 184 passed). Only 3 candidates obtained Grade I (6 in 1971). In the SRP and SPM certificate examination the percentage of passes for Arabic Secondary School was quite good but lower than that of 1971. Out of 76 candidates for SRP examination only 25 (38%) passed and out of 49 candidates for SPM examination only 20 (40%) obtained full certificates and 10 General Certificates, 19 failed (1971 23 out of 34 (67%) obtained full certificates, 7 General Certificates and 4 failed). However, these passes were the highest achieved by school candidates in the whole State. The sole candidate in the whole State who obtained Grade I and 2 out of 3 candidates in the whole State who obtained Grade II in SPM examination were candidates from this school.

There are no increase in the number of students in Hassanal Bolkiah Arab Secondary School over 1971 i.e. 396 students - more male students (257 than female students (139).

Forty-eight teachers - 39 of whom were female - passed in the Religious Teachers' course 1971/1972 and 5 out of 9 candidates passed repeat examination bringing the number of local teachers trained in Religious Teachers' Course to 257. At the end of 1972 only 5 local teachers remained untrained (other than student teachers).

Adult Education classes throughout the State were divided into Religious Adult Classes numbering 179 classes with 4,392 students (4,204 - in 1971): 1,515 male and 2,877 female, and Quran Adult Class numbering 108 classes with 2,623 students (e,593 in 1971) : 1,005 male and 1,618 female. 150 teachers, 105 male and 45 female, were teaching in these classes.

SOCIAL DEVELOPMENT

Information and Propagation

The total number of permanent officers and staff in this section was 41 persons amongst whom 4 new officers were appointed in 1972. They were divided into three units i.e. Brunei/Muara and Temburong Unit, Unit for Tutong District and Unit for Belait. Each unit has its own head, officers and staff.

A major achievement of the information section was the monthly publication of translation (tafsir) 'Darus Salam' - 12 publications of translation (tafsir) have been issued. This will be continued until the whole Quran was completely translated. Three books have been published, two of which were sold to the public and one was given free. Religious Department magazines Nos. 27 and 28 have also been published and distributed free.

Photograph production has increased to 6,540 pieces in all sizes (4,460 in 1971) out of which 2,986 were for newspapers and magazines.

168 visits were made to the whole State and during these visits 794 films were shown to 56,710 persons (1,649 films and 39,000 persons in 1971).

Radio programmes were increased to 205 (191 in 1971).

- APPENDIX A - Statement on the number of officers and Staff of Religious Affairs Department, 1972.
- APPENDIX B - Statement on the number of Pilgrim from Brunei in the year 1972*
- APPENDIX C - Members of Pilgrim Advisory Committee, 1972

SOCIAL DEVELOPMENT

- APPENDIX D (i) - Members of Muslim Religious Council
- D (ii) - Members of Legislation Committee
- D (iii) - Members of Judicial Committee
- APPENDIX E - Council's Assistance for the Construction of New Mosques and Assistance for the Maintenance of Kampong Mosques.
- APPENDIX F - Statement of Funds for General Administration 1971 and Properties
- APPENDIX G - Collection of 'Zakat Fitriah' 1971
- APPENDIX H - Statement on Kadzlis' Court in the whole State (a) and (b) 1972
- APPENDIX J - Statement on Marriages, Divorces and Reconciliation, 1972
- APPENDIX K - Statement on Persons Embracing Islam Religion 1972.
- APPENDIX L - List of Mosques throughout the State.
- APPENDIX M - Statement on Students and Lecturers of Seri Begawan Religious Teachers' College 1972.
- APPENDIX N - Statement on Students of Hassanah Bolkiah and Raja Isteri Anak Damit Arabic Secondary School, 1972, and Teachers of SMAHB/RIAD, 1972.
- APPENDIX Q - Statement on Scholarship of Religious Affairs Department, 1972
- APPENDIX R (i) - Statement on Religious School throughout the State 1972
- R (ii) - Statement on School with Religious Knowledge as a Subject, 1972
- APPENDIX S - Statement on number of Teachers, Pupils and Classes in Religious School, 1972.

SOCIAL DEVELOPMENT

- APPENDIX T - Statement on Religious Pupils and Teachers 1972.
- APPENDIX U (i) - Statement on Religious School Examination 1972
- U (ii) - Statement on LCE and MCE Examination 1972.
- APPENDIX V - Statement on Religious Teachers' College Examination 1972
- APPENDIX W (i) - Statement on Religious Adult Classes 1972
- W (ii) - Statement on Quran Adult Classes 1972.
- APPENDIX X (i) - Statement on Production of Information Films on Religious Affairs Department 1972
- X (ii) - Film Shows and Information Lectures 1972
- X (iii) - Religious Programme in Radio 1972
- X (iv) - Information Publications.

APPENDIX A

ADMINISTRATION OF DEPARTMENT OF RELIGIOUS AFFAIRS, BRUNEI 1972

1. Number of appointments allotted 1972	= 1,212	
2. Number of appointments filled	= 803	
	1971	1972
3. Monthly paid Officers	816	803
4. Daily paid workers	142	143

SOCIAL DEVELOPMENT

ADMINISTRATION OF DEPARTMENT OF RELIGIOUS AFFAIRS, BRUNEI, 1972

1.	Number of appointments allotted 1972	= 1,212
2.	Number of appointments filled	= 803
	1971	1972
3.	Monthly paid Officers	816 803
4.	Daily paid workers	142 143

5.	A) Officers Division I:	3	3
	B) Officers Division II:	15	18
	C) Officers Division III:	34	40
	D) Officers Division IV:	478	520
	E) Officers Division V:	286	204
	F) Contract Teachers from Singapore	-	18
		816	803

6. **Mosques Officers:**

a) Imam:	38	35
b) Khatib:	8	8
c) Bilal and Mudim:	26	26
d) Merbut:	17	18
	89	87

SOCIAL DEVELOPMENT

APPENDIX B

STATEMENT ON THE NUMBER OF PILGRIMS, FROM BRUNEI 1972

District	Male		Female		Total
	By Air	By Sea	By Air	By Sea	
Brunei/Muara	139	23	114	17	320 persons
Tutong	6	-	6	-	14 persons
Belait	10	2	8	1	25 persons
Temburong	3	1	-	-	4 persons
Total	158	28	128	18	363 persons

SOCIAL DEVELOPMENT

APPENDIX C.

MEMBERS OF PILGRIM ADVISORY COMMITTEE, 1972.

1. Yang Berhormat: Pehin Orang Kaya Ratna Di-Raja Dato
Seri Utama Awang Haji Mohd. Zain bin Haji Serudin - Chairman
2. Yang Mulia Awang Haji Abdullah bin Matassan - Deputy Chairman
3. Yang Amat Mulia Pengiran Setia Jaya Pengiran Haji
Abdul Momin bin Pengiran Othman - Member
4. Yang Amat Mulia Pengiran Laila Wijaya Pengiran Haji
Mohd. Yusof bin Pengiran Mohd. Limbang - "
5. Yang Berhormat Pehin Orang Kaya Laksamana Dato
Laila Utama Awang Haji Abdul Rahman bin Pehin Orang
Kaya Shahbandar Haji Mohd. Taha - "
6. Yang Berhormat Dato Paduka Awang Haji Abdul Azis bin
Begawan Pehin Udana Khatib Dato Seri Paduka Awang
Haji Umar (Wakil Pejabat Setia Usaha Kerajaan, Brunei)
- "
7. Yang Berhormat Orang Kaya Pekerma Indera Awang
Haji Jilli bin Ibrahim - "
8. Yang Berhormat Awang Haji Sapawi bin Metassim - "
9. Yang Mulia Pengiran Haji Abbas bin Pengiran Aliuddin- "
10. Yang Di-Muliakan Pehin Orang Kaya Perdana Indera
Dato Setia Awang Haji Mohd. Taha Bin Haji Bakir - "
11. Yang Mulia Orang Kaya Setia Haji Abdul Rahim bin Akim - "
12. Yang Mulia Awang Haji Mohd. Kassim bin Haji Ahmad - Secretary

SOCIAL DEVELOPMENT

APPENDIX D(I)

MEMBERS OF MUSLIM RELIGIOUS COUNCIL, BRUNEI

APPOINTMENT FROM 1ST JUNE 1971 (FOR A PERIOD OF 2 YRS.)

1. Yang Berhormat Pehin Orang Kaya Ratna Di-Raja Dato Seri Utama Awang Haji Mohd. Zain bin Haji Serudin, D.K., P.S.S.U.B., D.S.L.J., P.H.B.S., Majlis .
Yang Di-Pertua Majlis.
2. Yang Teramat Berhormat Pehin Orang Kaya Laila Setia Bakti Di-Raja Dato Seri Laila Utama Awang Isa bin Dato Perdana Menteri Dato Laila Utama Awang Haji Ibrahim D.K., S.P.N.B., D.S.B.S., C.V.O., C.B.E.
P.H. B.S, P.J.K., Member
3. Yang Teramat Mulia Seri Paduka Duli Pengiran Temang-gong Sahibol Bahar Pengiran Haji Mohammad bin Pengiran Abdul Rahman Piut, D.K., S.P.M.B., D.S.
N.B., P.A.N.B., P.O.A.S.M.B.E., P.J.K., "
4. Yang Berhormat Dato Paduka Awang Haji Abdul Aziz bin Begawan Pehin Udana Khatib Dato Seri Paduka Awang Haji Umar, D.P.M.B., S. L.J. "
5. Yang Amat Mulia Pengiran Setia Raja Pengiran Jaya bin Pengiran Haji Rajid, D.K., D.N.P.N.B., P.H.B.
S., Q.P.M., C.P.M., "
6. Yang Amat Mulia Pengiran Setia Jaya Pengiran Haji Momin bin Pengiran Othman D.K., D.S.N.B., S.L.J., C.V.O., P.H.B.S.,
P.J.K.

SOCIAL DEVELOPMENT

- | | |
|--|-----------|
| 7. Yang Di-Muliakan Pehin Dato Seri Maharaja Dato Seri Utama Awang Haji Ismail bin Omar Abdul Aziz ,
D.K., P.S.S.U.B., D.S.L.J., S.M.B., P.H.B.S., P.
I.S. | Member |
| 8. Yang Berhormat, Pehin Jawatan Luar Perkerma Raja Dato Seri Utama Awang Haji Mohd. Taha bin Pehin Ratna Di-Raja Awang Hussin, D.K., S.P.M.B.,
D.S.N.B., P.J.K. | " |
| 9. Yang Berhormat Pehin Orang Kaya Laksamana Dato Seri Laila Utama Awang Haji Abdul Rahman bin Pehin Orang Kaya Shahbandar Haji Mohd. Taha, D.K.,
D.S.S.U.B., S.P.M.B., D.S.L.J., M.V.O., P.S.B.,
P.O.A.S. P.H.B.S., P.J.K., | " |
| 10. Yang Berhormat Begawan Pehin Khatib Dato Seri Utama Awang Haji Metali bin Matyassin, D.K., D.S.S.,
U.B., D.P.M.B., P.O.A.S., P.H.B.S., P.J.K., | " |
| 11. Yang Di-Muliakan Pehin Si-Raja Khatib Awang Haji Abdul Hamid bin Pehin Setia Pahlawan Haji Mohd. Ja'afar, S.L.J. | " |
| 12. Yang Di-Muliakan Pehin Tuan Iman Dato Paduka Awang Haji Mohd. Yusof bin Pehin perdana Wangsa Haji Mohammad, D.P.M.B., | " |
| 13. Yang Mulia Awang Haji Abdul Hamid bin Bakal. | " |
| 14. Yang Mulia Awang Yahya bin Haji Ibrahim. | " |
| 15. Yang Mulia Tuan Haji Abdul Rahman bin Mohammad
P.O.A.S. | " |
| 16. Yang Mulia Awang Abdul Saman bin Kahar. | " |
| 17. Yang Mulia Awang Haji Abdul Aziz bin Juned. | " |
| 18. Yang Mulia Awang Ibrahim bin Haji Mohd. Tinggal | Secretary |

SOCIAL DEVELOPMENT

APPENDIX D (ii)

MEMBERS OF LEGISLATION COMMITTEE

(Appointment from 1st June, 1971 (for a period of 2 yrs.))

1. Yang Di-Muliakan Pehin Dato Seri Maharaja Dato Seri Utama Awang Haji Ismail bin Omar Abdul Aziz, D.K., P.S.S.U.B., D.S.L.J., S.M.B., P.H.B.S., Chairman
2. Yang Berhormat Begawan Pehin Khatib Dato Seri Utama Haji Metali bin Matyassin, D.K., P.S.S.U.B., D.P.M.B., P.O.A.S. P.J.K.
3. Yang Berhormat Pehin Orang Kaya Laksamana Dato Seri Laila Utama Awang Haji Abdul Rahman bin Pehin Orang Kaya Shahbandar Haji Mohd. Taha, D.K., D.S. S.U.B., D.S.L.J., M.V.D., P.O.B., P.O.A.S., P.H.B.S., P.J.K.
4. Yang Berhormat Pehin Orang Kaya Amar Di-Raja Dato Seri Utama (Dr) Awang Haji Mohd. Jamil Al-Sufri bin Begawan Pehin Udana Khatib Dato Seri Paduka Haji Umar, D.K., D.S.L.J., D.P.M.B., P.O.A.S., P.H.B.S.
5. Yang Mulia Awang Haji Abdul Hamid bin Bakal.
6. Yang Mulia Awang Yahya bin Haji Ibrahim.
7. Yang Mulia Awang Haji Abdul Aziz bin Juned.
8. Yang Mulia Awang Saman bin Abdul Kahar.
9. Yang Mulia Tuan Haji Abdul Rahman bin Mohammad, P.O.A.S.
10. Yang Mulia Awang Mohd. Ali bin Mohd. Daud.
11. Yang Mulia Awang Zakaria bin Dato Mahawangsa Haji Sulaiman.

SOCIAL DEVELOPMENT

APPENDIX D (iii)

Names of Member of Judiciary Committee

(Appointment from 1st June, 1967 (for a period of 2 yrs.)

1. Yang Di-Mulikan Pehin Datu Seri Maharaja Dato Seri
Utama Awang Haji Ismail bin Omar Abdul Aziz, D.K.,
P.S.S.U.B., D.S.L.J., S.M.B., P.H.B.S., P I.S. Chairman
2. Yang Berhormat Pehin Orang Kaya Laila Setia Bakti
Di-Raja Dato Laila Utama Awang Isa bin Pehin Datu
Perdana Menteri Dato Seri Utama Haji Ibrahim, D.K.,
S.P.M.S., D.S.N.B., C.V.O., O.B.E., P.H.B. S., Permanent Member
P.J.K.,
3. Yang Mulia Awang Yahya bin Ibrahim . " "
4. Yang Mulia Tuan Haji Abdul Rahman bin Mohammad,
P.O.A.S. Additional Member
5. Yang Mulia Awang Ali Mohd. Daud. " "

SOCIAL DEVELOPMENT

APPENDIX E

ASSISTANCE FOR MOSQUES FOR THE WHOLE STATE 1971

ASSISTANCE FOR THE MAINTENANCE OF MOSQUES

Name of Mosque	Amount
1) Masjid Kasat	\$ 1,000.00
2) Masjid Pulau Baru2	932.55
3) Masjid Pengkalan Batu	1,000.00
4) Masjid Pudak	570.00
5) Masjid Tanah Jambu	1,000.00
6) Masjid Kupang	770.00
7) Masjid Birau	1,000.00
8) Masjid Lumapas	1,000.00
9) Masjid Layang	1,000.00
10) Masjid Penapar	1,000.00
11) Masjid Penanjong	1,000.00
Total	\$10,302.55

b) ASSISTANCE FOR THE CONSTRUCTION OF NEW MOSQUES 1972

Throughout the year 1972, Government of His Highness provided financial assistance to 5 villages mosques through this Department as follows:

Name of Mosque	Amount of Government Assistance	Contribution collected from Public	Cost of Mosque
1) Masjid Kampong Menengah, Tutong	\$ 5,400.00	\$ 4,685.49	\$10,000.00
2) Masjid Kampong Batu Marang, Brunei/Muara	6,141.76	6,075.90	12,000.00
3) Masjid Kampong Danau, Tutong	12,010.00	12,010.00	24,000.00
4) Masjid Kampong Tanjong Maya, Tutong	12,000.00	21,068.40	42,000.00
	\$35,551.76	\$43,839.79	\$88,000.00
	\$10,302.55 \$35,551.76		
Total of all Government Assistance	\$45,854.31		

SOCIAL DEVELOPMENT

APPENDIX F

STATEMENT ON FUND FOR GENERAL ADMINISTRATION AND PROPERTIES

Money Collected	\$137,183.09
Balance on 1.1.1971	
Excess earning on expenditure for the year ended on 31.12.1971.	\$ 36,751.64
	\$173,934.73

SOCIAL DEVELOPMENT

LIST OF PROPERTIES AND INVESTMENT

PROPERTIES

1 Piece of Land	E.D.R. 596 Lot 659	Area 1.67	Acres	
1 " " "	E.D.R. 727 Lot 658	" 1.96	"	
1 " " "	E.D.R. 437 Lot 523	" 2.882	"	
1 " " "	E.D.R. 442 Lot 524	" 1.615	"	
1 " " "	E.D.R. - Lot 3850	" 0.078	"	
1 Wooden house at Jalan Dato Shabbandar, Kuala Belait.				
1 Piece of Land	E.D.R. 973 Lot 1061	Area 1A.		0R. 6.2/3P.
1 " " "	E.D.R. 5352 Lot 5845	" OA.		1R. 7.71P.
1 " " "	E.D.R. 7575 Lot 7990	" 0.32A.		
1 " " "	E.D.R. 1790 Lot 1429	" 5A.		
1 " " "	E.D.R. 3357 Lot 3219	" 2A.		0R. 8.5P.
1 " " "	E.D.R. 5743 Lot 6229	" 0.26 1/3A.		
1 " " "	E.D.R. 8176 Lot 8590	" OA.		2R. 17P.
1 " " "	E.D.R. 2441 Lot 2544	" OA.		2R. 26 2/3P.
1 " " "	E.D.R. 2727 Lot 2590	" OA.		0R. 37.25F.
1 " " "	E.D.R. 2066 Lot 1750	" OA.		3R. 34 1/2P.
1 " " "	E.D.R. 530 Lot 130	" 1.15A.		
1 " " "	E.D.R. 7174 Lot 7590	" OA.		1R. 29 1/3P.
1 " " "	E.D.R. 3308 Lot 3395	" 2A.		0P. 11 2/3P.
1 " " "	E.D.R. 6202 Lot 6649	" OA.		0R. 12.75P.
1 " " "	E.D.R. 4092 Lot 4288	" OA.		1R. 21.5P.
1 " " "	E.D.R. 2915 Lot 3195	" 1A.		2R. 5.25P.
1 " " "	E.D.R. 1462 Lot 1401	" 2A.		1R. 02P.
1 " " "	E.D.R. 1915 Lot 1806	" 2A.		1R. 07P.
1 " " "	E.D.R. 2454 Lot 2413	" OA.		2R. 39 1/4P.
1 " " "	E.D.R. 2803 Lot 2767	" 1A.		0R. 0.66P.
1 " " "	E.D.R. 2322 Lot 2387	" 1A.		2R. 00P.
1 " " "	E.D.R. 4616 Lot 4811	" OA.		2R. 35 1/3P.
1 " " "	E.D.R. 4604 Lot 4799	" 1A.		2R. 21 1/3P.
1 " " "	E.D.R. 2028 Lot 2419	" 2A.		1R. 35.5P.
1 " " "	E.D.R. 1262 Lot 1125	" 1A.		1R. 33 1/3P.
1 " " "	E.D.R. 2285 Lot 2121	" OA.		1R. 33.5P.
1 " " "	E.D.R. 4737 Lot 4929	" 2A.		0R. 28P.
1 " " "	E.D.R. 7187 Lot 7603	" OA.		2R. 22 7/24P.
1 Piece of Land	E.D.R. 2579 Lot 2539	Area OA.		2R. 4 1/6P.
1 " " "	E.D.R. 2206 Lot 2155	" 1A.		1R. 23.646P.
1 " " "	E.D.R. 2711 Lot 2897	" OA.		2R. 32P.
1 " " "	E.D.R. 7905 Lot 8319	" 1A.		0R. 7 1/24P.
1 " " "	E.D.R. 3732 Lot 6867	" OA.		2R. 17 17/24P.
1 " " "	E.D.R. 6334 Lot 6769	" OA.		2R. 12 7/24P.
1 " " "	E.D.R. 703 Lot 703	" OA.		2R. 12 4/9P.
1 " " "	E.D.R. 2715 Lot 2917	" OA.		2R. 13 1/3P.
1 " " "	E.D.R. 67 Lot 35	" 1A.		1R. 11 1/4P.
1 " " "	E.D.R. 66 Lot 36	" 1A.		2R. 1 1/24P.
1 " " "	E.D.R. 1104 Lot 967	" OA.		0R. 6 2/3P.
1 Shop No.4 at Bangar, Temburong				
1 Piece of Land	E.D.R. 392 Lot 370	Section 30/144		
1 " " "	E.D.R. 7423 Lot 7844	" 1A.		0R. 9.25P.
		" OA.		2R. 12P.

SOCIAL DEVELOPMENT

APPENDIX G.

COLLECTION OF 'ZAKAT FITRAH'/PROPERTIES 1971

a) CASH

Total of Collection 1971	\$90,673.84
Distributed to 'Asnafs'	\$30,722.74
Distributed to 'Amils'	\$15,137.20
Distributed to Council	\$44,819.84
Total	\$90,679.84

b) RICE SECTION

Total of Collection 1971	517 Katis & 9 tahils
Distributed to 'Asnafs'	181 katis & 6 tahils
Distributed to 'Amils'	77 katis & 7 tahils
Distributed to Council	258 katis & 12 tahils
Total	517 katis & 9 tahils

c) PADI SECTION

Total of Collection 1971	4,047 $\frac{3}{4}$ gantangs
Distributed to 'Asnafs'	1,349 gantangs
Distributed to 'Amils'	678 gantangs
Distributed to Council	2,020 $\frac{3}{4}$ gantangs
Total	4,047 $\frac{3}{4}$ gantangs

SOCIAL DEVELOPMENT

APPENDIX d.

(A) STATEMENT ON KADZIS' COURT IN THE WHOLE STATE, 1972

Fault/s	No. of Case/s	No. of Accusation/s	No. of Acquittal	Conviction			Reproceeding		Case Withdrawn	proceeding
				Fine	On Bond	Imprison	Case	Person		
Total	120	224	1	181	-	33	1	1	1	1
Adultery	82	168	1	141	-	24	-	-	1 (2 persons)	-
Berthalust	15	26	-	17	-	9	-	-	-	-
Alcoholic Drinks	14	17	-	17	-	-	-	-	-	-
Wife claim for divorce with "Taqlak"	1	1	-	-	-	-	-	-	-	-
Claim for Child/Children Maintenance	5	5	-	-	-	-	-	-	-	-
Wife dispute	-	-	-	-	-	-	-	-	-	-
Drinking/Eating in the fasting Month	2	6	-	6	-	-	-	-	-	-
Reproceeding	1	1	-	-	-	-	-	-	-	-

SOCIAL DEVELOPMENT

APPENDIX B

(B) STATEMENT ON KADZIS' COURT IN THE WHOLE STATE, 1972

KADZIS' HIGHT COURT

District	Number of Case/s	No. of Accusation/s	Acquittal	Conviction			Reproceeding			Prison	Case Withdrawn	proceeding
				Fine	On Bond	Imprison	Case	Person	Fine			
Total	82	163	1	141	-	24	1	1	-	-	1 (2 persons)	-
Brunei/Muara	40	95	-	86	-	9	1	1	-	-	-	-
Belait	33	55	1	41	-	11	-	-	-	-	-	-
Tutong	8	16	-	12	-	4	-	-	-	-	-	-
Temburong	1	2	-	2	-	-	-	-	-	-	-	-

DISTRICT COURT OF KADZI

Total	38	56	-	40	-	9	-	-	-	-	-	-
Brunei/Muara	15	26	-	19	-	9	-	-	-	-	-	-
Belait	19	26	-	17	-	-	-	-	-	-	-	-
Tutong	-	-	-	-	-	-	-	-	-	-	-	-
Temburong	4	4	-	4	-	-	-	-	-	-	-	-

SOCIAL DEVELOPMENT

APPENDIX J (i)

Statement on Annual Marriages, Divorces and Reconciliation for Belait District 1972

Month	Marriages	Divorces	Reconciliations	Total
January	28	1	-	29
February	30	2	-	32
March	18	2	-	20
April	40	5	-	45
May	45	3	-	48
June	42	1	-	43
July	53	7	-	60
August	37	3	-	40
September	57	5	-	62
October	39	2	-	41
November	10	3	-	13
December	17	4	-	21
Total	396	34	-	430

APPENDIX J (ii)

Statement on Annual Marriage for Temburong

Month	Marriages	Divorces	Reconciliations
January	6	-	-
February	6	-	-
March	2	-	-
April	3	-	-
May	10	-	-
June	8	-	-
July	8	-	-
August	11	1	-
September	6	-	-
October	5	1	1
November	1	-	-
December	7	1	-
Total	73	4	1

SOCIAL DEVELOPMENT

APPENDIX J (iii)

Statement on Annual Marriages, Divorces and Reconciliations for Brunei/Muara District-1972

Month	Marriages	Divorce/s	Reconciliations	Total
January	9	-	-	9
February	11	-	-	11
March	13	2	-	15
April	9	1	-	10
May	10	2	-	12
June	9	-	-	9
July	7	2	-	9
August	12	3	-	15
September	9	1	-	10
October	2	1	2	5
November	-	-	-	-
December	16	2	-	18
Total	107	14	2	123

Statement on Annual Marriages, Divorces and Reconciliation

1971

Reconciliations	Total
	7
	1
	-
	3
	5
	1

SOCIAL DEVELOPMENT

APPENDIX J (i)

Statement on Annual Marriages, Divorces and Reconciliation for Belait District 1972

Month	Marriages	Divorces	Reconciliations	Total
January	28	1	-	29
February	30	2	-	32
March	18	2	-	20
April	40	5	-	45
May	45	3	-	48
June	42	1	-	43
July	53	7	-	60
August	37	3	1	41
September	57	5	-	42
October	39	2	1	42
November	10	3	-	13
December	17	4	-	21
Total	396	38	2	436

APPENDIX J (ii)

Statement on Annual Marriages, Divorces and Reconciliation for Temburong District 1972

Month	Marriages	Divorces	Reconciliations	Total
January	6	-	-	6
February	6	-	-	6
March	2	-	-	2
April	3	-	-	3
May	10	-	-	10
June	8	-	-	9
July	8	-	-	6
August	11	1	-	12
September	6	-	-	6
October	5	1	1	7
November	1	-	-	1
December	7	1	-	8
Total	73	4	1	76

SOCIAL DEVELOPMENT

APPENDIX J (iii)

**Statement on Annual Marriages, Divorces and Reconciliations
for Brunel/Muara District-1972**

Month	Marriages	Divorces/s	Reconciliations	Total
January	9	-	-	9
February	11	-	-	11
March	13	2	-	15
April	9	1	-	10
May	10	2	-	12
June	9	-	-	9
July	7	2	-	9
August	12	3	-	15
September	9	1	-	10
October	2	1	2	5
November	-	-	-	-
December	16	2	-	18
Total	107	14	2	123

APPENDIX J (iv)

**Statement on Annual Marriages, Divorces and Reconciliation
for Tutong District 1971**

Month	Marriages	Divorce/s	Reconciliations	Total
January	7	-	-	7
February	-	1	-	1
March	-	-	-	-
April	3	-	-	3
May	5	-	-	5
June	1	-	-	1
July	3	-	-	3
August	2	1	-	3
September	1	-	-	1
October	2	-	-	2
November	-	-	-	-
December	1	-	-	1
Total	25	2	-	27

SOCIAL DEVELOPMENT

APPENDIX J (V)

Statement on the Total Marriages, Divorces and Reconciliation 1972

District	Marriages	Divorces	Reconciliations
Brunei/Muara	396	38	2
Tutong	73	4	1
Belait	107	13	2
Temburong	25	2	-
Total	601	57	5

SOCIAL DEVELOPMENT

APPENDIX K.

Statement on Persons Embracing the Islamic Religion 1972
Particulars on Race & Sex

District	Iban		Dusun		Chinese		European/ Eurasian		Other Indigenous group		Others		Total	
	M	F	M	F	M	F	M	F	M	F	M	F		
Brunei/Muara	9	8	4	3	4	7	-	1	6	1	-	3	46	Korean Thal. Philippino
Temburong	2	-	-	-	-	-	-	-	1	1	-	-	4	
Tutong	1	1	5	5	1	-	-	1	-	1	-	-	15	
Belait	12	7	9	5	1	8	-	-	2	2	-	-	48	Ceylonese American
Total	24	16	18	13	6	15	1	2	9	5	-	4	113	

SOCIAL DEVELOPMENT

APPENDIX L (I)

LIST OF MOSQUES THROUGHOUT THE STATE

Brunei/Muara District Mosques.

1. Masjid Omar Ali Saifuddin.
2. Masjid Setia Ali, Pekan Muara.
3. Masjid Sufri Bolkiah, Kampong Perpindahan, Berakas.
4. Masjid Jama', Sengkuring.
5. Masjid Kilanas.
6. Masjid Sungai Hanching.
7. Masjid Tanah Jambu.
8. Masjid Kampong Bunut.
9. Masjid Jerudong.
10. Masjid Batu Marang.
11. Masjid Pengkalan Batu.
12. Masjid Panchor Murai.
13. Masjid Masin.
14. Masjid Lumapas.
15. Masjid Kasat.
16. Masjid Sungai Besar.
17. Masjid Limau Manis.
18. Masjid Dato Gandi.*
19. Masjid Junjongan.*
20. Masjid Menunggol.*
21. Masjid Pulau Baru2.
22. Masjid Pulau Berbunut.
23. Masjid Puduk.

Note:

Indicated as * = Still under planning

SOCIAL DEVELOPMENT

APPENDIX L (ii)

Tutong District Mosques

1. Masjid Hassanal Bolkiah, Tutong.
2. Masjid Penanjong.
3. Masjid Telisal .
4. Masjid Danau.
5. Masjid Tanjong Maya.
6. Masjid Penapar.
7. Masjid Birau.
8. Masjid Kerian.
9. Masjid Sinaut.
10. Masjid Kupang.
11. Masjid Lamunin.
12. Masjid Kiudang.
13. Masjid Layong.
14. Masjid Kati Mahar.*
15. Masjid Bukit Beruang.*

Note:

Indicated as * = Still under planning

COMMUNICATIONS

APPENDIX L (iii)

Belait District Mosques

1. Masjid Mohammad Jamalul Alam.
2. Masjid Pekan Seria.
3. Masjid Sungai Liang.
4. Masjid Labi.
5. Masjid Kuala Belait.
6. Masjid Bukit Sawat (Sungai Ubar).

Temburong District Mosques

1. Masjid Utama Mohd. Salleh.
2. Masjid Labu Estate.
3. Masjid Batu Apoi.
4. Masjid Bokok.
5. Masjid Belingus/Selangau.
6. Masjid Batang Tawau.*

Note:

Indicated as * = Still under planning

APPENDIX M

STATEMENT ON STUDENTS AND STAFF OF SERI BEGAWAN RELIGIOUS
TEACHERS' COLLEGE 1972

Number	Course 'A'				Course 'BII'				Total				Total altogether				LECTURERS						Past-time	Total	Total Altogether		
	M		F		M		F		M		F		M		F		M		F		M					F	
1.	16	10	6	28	22	38	60	2	-	5	1	1	-	3	-	11	1	12									
	16	10	6	28	22	38	60	2	-	5	1	1	-	3	-	11	1	13									

STAFF OF SERI BEGAWAN RELIGIOUS TEACHERS
COLLEGE

Number	Clerk	Office Operation	Improver	Cooks	Warden	Watchman	Gardener	Labour	Librarian	Total
1.	1	1	3	5	1	3	1	5	3	21

APPENDIX N (i)

**TOTAL OF STUDENTS AND CLASSES OF HASSANAL
BOLKIAH AND RAJA ISTERI ANAK DAMIT ARABIC
SECONDARY SCHOOL, 1972**

Class	Students		Total of Students	Total of Classes
	M.	F.		
Preparatory				
I	8	-	8	1
Pre. II	19	37	56	2
Form I	6	26	34	1
Form II	32	54	90	3
Form III	16	57	71	3
Form IV	24	55	79	4
Form V	24	10	42	2
Form VI	40	4	14	1
Total	139	257	390	17

Mean of allotment:

23 Students per Form

2.2 Teachers per Form

10.4 Students per Teacher

SOCIAL DEVELOPMENT

APPENDIX N (II)
PERMANENT TEACHERS FOR HASSANAL BOLKIAH & RAJA ISTERI
ANAK DAMIT ARABIC SECONDARY SCHOOL, 1972.

Appointment	Sex		With Degree		Teacher Course		Non- Degree Normal Course		Other Courses		Total
	M	F	M	F	M	F	M	F	M	F	
Local	4	3	3	1	-	-	-	2	1	-	7
Contract	9	@ 4	1	-	2	2	-	-	6	9	13
Borrowed from Singapore	15	3	-	-	8	3	7	-	-	-	18
Total	28	10	4	1	10	5	7	2	7	9	38

@ Including one appointed on month-to-month basis.

SOCIAL DEVELOPMENT

APPENDIX Q.

STATEMENT ON SCHOLARSHIP OF RELIGIOUS AFFAIRS DEPARTMENT, 1972.

No: Place Studying			LOWER SECONDARY			UPPER SECONDARY		PRE-UNIVERSITY		DEGREE			Total
	Male	Female	I	II	III	IV	V	VI-1	VI-2	I	II	III	
1. Al-Junied, Singapore	8	-	1	5	2	-	-	-	-	-	-	-	8
2. Al-Bala Al-Sanat, Kelantan	-	1	-	-	5	2	-	-	-	-	-	-	7
3. Taziddal Saba, Ipoh	4	-	-	-	-	-	4	-	-	-	-	-	4
4. Sultan Zalaan Abiddia, Trengganu	3	5	-	-	-	7	6	-	-	-	-	-	33
5. Sekelan Raja Perangham Is'izah	-	1	-	-	-	-	4	-	-	-	-	-	1
6. Makrah Kalan Arabi, Kelantan	9	8	-	-	-	-	-	-	5	-	-	-	19
7. Kelas Islam, Kelang	0	8	-	-	-	2	4	6	4	-	-	-	17
8. University Kabahgaan	10	-	-	-	-	-	-	-	-	3	3	-	19
9. University Malaya	1	-	-	-	-	-	-	-	-	-	1	-	1
10. University Al-sabar Cairo	4	-	-	-	-	-	-	-	-	-	1	3	4
Total	54	25	1	5	7	11	13	13	14	3	8	3	60

SOCIAL DEVELOPMENT

APPENDIX R (1)

STATEMENT ON RELIGIOUS SCHOOL, 1972 BRUNE/MUARA DISTRICT RELIGIOUS SCHOOL.

No:	School	Total of Classes	Pupils		Total of Pupils	Teacher/s		Total of Teacher/s
			M	F		M	F	
1.	S.U. Madrasah (morning)	24	325	408	731	1	13	14
2.	S.U. Madrasah (afternoon)	21	198	448	634	5	11	16
3.	S.U. Lurong Dalam	15	158	365	523	2	9	11
4.	S.U. Kg. Saba (afternoon)	7	93	110	203	1	2	3
5.	S.U. Anggerek Desa	7	97	81	178	1	3	4
6.	S.U. Kg. Setia	5	74	84	158	2	-	2
7.	S.U. Amar Pahlawan	8	83	80	141	1	3	5
8.	S.U. Delima Satu	7	47	90	137	1	4	5
9.	S.U. Kelanas	8	52	60	121	1	5	6
10.	S.U. Gadong	7	56	64	120	-	5	5
11.	S.U. Bandahara Sakam, Bunut	6	64	50	114	1	3	4
12.	S.U. Dato Rana Wangsa, Lambak	7	53	50	103	1	4	5
13.	S.U. Kg. Saba (morning)	6	36	66	102	1	1	2
14.	S.U. Kg. Kiulap.	7	59	43	102	2	3	5
15.	S.U. Lumapas	6	55	66	101	3	-	3
16.	S.U. Madrasah Setia Ali	7	38	32	90	1	4	5
17.	S.U. Sungai Hanching	8	43	39	82	3	3	6
18.	S.U. Pintu Malim	4	39	40	79	1	1	2
19.	S.U. OKBI Subok	2	35	46	79	2	-	2
20.	S.U. Tanah Jambu	6	35	39	34	2	3	5
21.	S.U. Burong Pingai	4	37	89	66	1	1	2
22.	S.U. Masin	4	82	27	49	1	1	2
23.	S.U. Mentiri	5	24	19	43	2	1	3
24.	S.U. Limau Manis	4	23	21	40	1	-	1
25.	S.U. Serasa Muara	5	28	12	19	-	2	2
26.	S.U. Panchor Murai	2	22	26	48	1	-	1
27.	S.U. Kasat	2	21	16	37	1	-	1
28.	S.U. Junjongan	4	15	21	36	2	-	2
29.	S.U. Pantai Jiam, Beribi	4	18	17	35	2	-	2
30.	S.U. Anak2 Askar Melayu Di-Raja	4	13	16	33	-	3	3
31.	S.U. Pangcalan Batu	4	16	13	29	1	2	2
32.	S.U. Bengkurong	3	19	9	27	1	1	2
33.	S.U. Kiarong	3	13	11	24	1	-	1
Total		210	1884	2488	4372	47	87	134

SOCIAL DEVELOPMENT

APPENDIX

BELAIT DISTRICT RELIGIOUS SCHOOL

No:	School	Total of Classes	Pupils		Total of Pupils	Teacher/s		Total of Teacher/s
			M	F		M	F	
1.	S.U. Pekan Belait	20	220	167	501	1	13	16
2.	S.U. Mohammad Alam Saria	32	262	336	618	4	9	13
3.	S.U. Sungai Teraban	5	30	34	94	2	2	4
4.	S.U. Sungai Liang	17	17	26	43	1	3	2
5.	S.U. Lumut	4	17	21	30	1	1	2
6.	S.U. Labi	4	36	32	28	1	1	2
7.	S.U. Bukit Sawat	4	19	12	24	1	-	1
8.	S.U. Rempayoh	3	2	16	4	1	-	1
9.	S.U. Kuala Batai	2	3	1	6	1	-	1
Total		81	379	793	2332	15	27	42

TEMBURONG DISTRICT RELIGIOUS SCHOOL

No:	School	Total of Classes	Pupils		Total of Pupils	Teacher/s		Total of Teacher/s
			M	F		M	F	
1.	S.U. Dato' Gandi	4	68	73	337	-	4	4
2.	S.U. Sultan Hassan, Bangar	9	44	57	101	2	5	7
3.	S.U. Batu Marang	5	41	59	100	1	2	3
4.	S.U. Puni	5	35	37	72	1	2	3
5.	S.U. Sungai Besar	9	20	26	36	3	-	3
6.	S.U. Puduk	1	18	21	39	1	-	1
7.	S.U. Bokok	2	24	13	37	2	2	4
8.	S.U. Batu Apol	3	15	21	36	-	1	1
9.	S.U. Belais	5	29	18	33	4	2	3
10.	S.U. Menunggol	3	15	33	28	2	-	2
11.	S.U. Piasau2	4	17	13	28	1	3	2
12.	S.U. Pulau Baru2	2	30	14	24	2	-	2
13.	S.U. Senokoh	3	10	10	20	1	-	1
14.	S.U. Puduk	3	8	7	15	1	1	1
15.	S.U. Pulau Berbumut	5	8	7	38	1	1	2
16.	S.U. Labu Estate	2	4	7	12	1	-	1
17.	S.U. Belingus	2	2	7	11	1	-	1
Total		63	353	401	754	21	28	42

SOCIAL DEVELOPMENT

TUTONG DISTRICT RELIGIOUS SCHOOL

No.	School	Total of Classes	Pupils		Total of Pupils	Teacher/s		Total of Teacher/s
			M	F		M	F	
1.	S.U. Sengkuring	10	74	104	178	1	4	7
2.	S.U. Muda Hashim	6	35	66	101	3	5	8
3.	S.U. Sengkarai	4	45	56	101	1	2	3
4.	S.U. Penanjong	5	34	59	93	2	2	4
5.	S.U. Abdul Rashid	6	41	43	84	2	2	4
6.	S.U. Keriam	6	36	44	80	1	5	6
7.	S.U. Lamunin	6	33	42	75	2	2	4
8.	S.U. Senaut	5	28	34	65	2	3	5
9.	S.U. Kludang	6	12	31	63	2	3	5
10.	S.U. Telisai	5	19	35	52	1	3	4
11.	S.U. Kg. Menengah	6	22	30	52	1	1	2
12.	S.U. Danau	6	21	34	52	3	4	9
13.	S.U. Jerudong	4	51	27	46	2	-	2
14.	S.U. Mulsut	3	21	25	46	1	1	2
15.	S.U. Kupang	5	15	28	39	3	-	3
16.	S.U. Birau	5	23	25	38	1	3	4
17.	S.U. Pg. Muda Mahkota	6	10	25	35	1	3	4
18.	S.U. Bukit Penggal	4	17	19	36	1	2	3
19.	S.U. Penapar	4	20	15	35	1	2	3
20.	S.U. Lubok Pulau	4	14	21	35	1	1	2
21.	S.U. Kati Mahar	3	16	18	34	1	1	2
22.	S.U. Bukit Beruang	3	8	15	23	1	2	3
23.	S.U. Bekiau	3	11	10	21	2	-	2
24.	S.U. Layong	2	10	7	17	2	-	2
Total		117	594	804	1398	36	53	89

SOCIAL DEVELOPMENT

APPENDIX R (II)

SINGLE SUBJECT RELIGIOUS SCHOOL FOR BRUNEI/MUARA DISTRICT.

No:	School	Total of Classes	Pupils		Total of Pupils	Teacher/s		Total of Teacher/s
			M	F		M	F	
1.	S.M. Malayu SMJA (morning)	43	538	687	1225	5	1	5
2.	Maktab Melayu PSBS	41	633	421	1064	5	2	7
3.	S.M. Malayu SMJA (afternoon)	42	198	156	349	2	-	2
4.	S.M. SMJA Pusu Ulak	19	389	147	504	-	3	3
5.	S.M. Lela Menchanai	8	165	32	197	1	1	2
6.	S.M. Sungai Kabun	12	92	10	402	1	1	2
7.	S.M. Raja Isteri	31	-	248	248	-	2	2
8.	Brunei Preparatory School B.S.B. (morning)	25	446	365	812	1	2	3
9.	S.T.P.R.I. (afternoon)	11	-	364	364	-	2	2
10.	S.T.P.R.I. (morning)	20	-	531	531	-	3	3
11.	Brunei Preparatory School, Amar Pahlawan, Anggerek Desa	38	280	258	536	2	1	3
12.	Brunei Preparatory School, SUAS Muara.	10	131	142	273	-	2	2
13.	Brunei Preparatory School, B.S.B. (afternoon)	36	670	380	1250	-	5	5
14.	Brunei Preparatory School, OKSB, Kilanas	8	117	118	235	-	2	2
15.	Berakas English School	17	302	272	574	2	-	2
16.	SOAS College (afternoon)	66	622	-	622	3	-	3
17.	Brunei Preparatory School, HMS., Sg. Hanching	3	39	36	75	-	1	1
18.	St. Andrew Mission School	5	622	-	622	1	1	2
	Total	368	5280	4638	9976	23	29	52

SOCIAL DEVELOPMENT

SINGLE SUBJECT RELIGIOUS SCHOOL FOR TUTONG DISTRICT

No:	School	Total of Classes	Pupils		Total of Pupils	Teacher/s		Total of Teacher/s
			M	F		M	F	
1.	S.M.M. Muda Saahim	24	346	296	542	3	-	3
2.	Sufri Bolkiah English School	43	749	764	1523	2	5	7
3.	Tutong Preparatory School, Tutong	9	119	149	268	-	2	2
Total		76	3214	1209	2423	5	7	12

SINGLE SUBJECT RELIGIOUS SCHOOL FOR BELAIT DISTRICT

No:	School	Total of Classes	Pupils		Total of Pupils	Teacher/s		Total of Teacher/s
			M	F		M	F	
1.	S.M.M. Ahmad Tajuddin	27	302	269	571	2	3	5
2.	S.M.M. Mohammad Alam	31	367	401	768	1	3	4
3.	Perdana Wazir ia English School	27	295	344	639	1	3	4
4.	Anthony Abell College	38	528	543	1041	5	-	5
Total		123	1492	1367	3019	9	9	18

SINGLE SUBJECT RELIGIOUS SCHOOL FOR TEMBURONG DISTRICT

No:	School	Total of Classes	Pupils		Total of Pupils	Teacher/s		Total of Teacher/s
			M	F		M	F	
1.	S.M.M. Sultan Hassan	3	96	64	160	1	-	1
2.	Temburong Preparatory School, Bangar	3	123	105	228	-	1	1
Total		6	219	169	388	1	1	2

APPENDIX S.

STATEMENT ON TEACHERS, PUPILS AND CLASSES FOR ALL DISTRICTS

No:	District	Number of School	Number of Classes	Pupils		Total of Pupils		Teacher/s		Total of Teacher/s
				M	F	M	F	M	F	
1.	Brunei/Muara	33	213	1867	2500	4367	47	87		134
2.	Tutong	24	117	591	804	1398	37	52		89
3.	Belait	9	68	579	753	1332	15	27		42
4.	Temburong	17	63	353	401	754	21	20		41
Total		83	461	3393	4458	7851	120	186		305

STATEMENT ON TEACHERS, PUPILS AND CLASSES FOR ALL DISTRICTS
SINGLE SUBJECT RELIGIOUS SCHOOLS

No:	District	Number of School	Number of Classes	Pupils		Total of Pupils		Teacher/s		Total of Teacher/s
				M	F	M	F	M	F	
1.	Brunei/Muara	19	394	3477	2708	6185	26	29		55
2.	Tutong	3	76	1214	1209	2423	5	7		12
3.	Belait	4	123	1492	1527	3019	9	9		18
4.	Temburong	2	6	219	169	388	1	1		2
Total		28	589	6402	5613	12015	41	46		87

SOCIAL DEVELOPMENT

APPENDIX T

STATEMENT ON PUPILS AND RELIGIOUS TEACHERS 1972

a) Religious School :

District	Teachers		Pupils		Classes	Number of Schools
	M	F	M	F		
Brunel/Muara	47	87	1867	2500	213	33
Tutong	37	52	594	804	117	24
Belait	15	27	579	753	68	9
Temburong	21	20	353	401	63	17
Total	120	186	3393	4458	461	83
	308		7851		461	83

Means of allotment :

1 Teacher : 1.5 Classes
 1 Class : 17 Pupils
 1 Teacher : 26 Pupils

b) Single Religious Subject in Malay/English Schools :

District	Teacher(s)		School childrens		Classes	Number of Schools
	M	F	M	F		
Brunel/Muara	26	29	3477	2708	384	19
Tutong	5	7	1214	1209	76	3
Belait	9	9	1492	1527	123	4
Temburong	1	1	219	169	6	2
Total	41	46	6402	5613	589	28
	87		12015		589	28

Mean of Allotment

1 Teacher : 6.8 Classes
 1 Class : 21 Pupils
 1 Teacher : 139 Pupils

SOCIAL DEVELOPMENT

APPENDIX U (i)

STATEMENT ON RELIGIOUS SCHOOL EXAMINATION 1972

(Brunei Religious Primary school certificate)

District	Number of Candidates		Total	Number of Passed		Grade Pass			Normal	Total
	M	F		M	F	I	II	III		
Brunei/Muara	38	116	154	26	78	3	10	44	47	104
Tutong	13	50	63	10	19	-	-	11	18	29
Belait	19	40	59	16	25	-	7	16	18	41
Temburong	5	11	16	1	8	-	-	3	6	9
Total	75	217	292	53	130	3	17	74	89	183

APPENDIX U (ii) (a)

MALAYSIA CERTIFICATE OF EDUCATION EXAMINATION

HASSANAL BOLKIAH AND RAJA ISTERI ANAK DAMIT

ARABIC SECONDARY SCHOOL 1972

Number of Candidates	GRADE					Percentage of Full Certificate	Percentage of MCE and G.C.E.
	I	II	III	G.C.E.	Failed		
Male 18	-	-	10	4	4	55%	77%
Female 31	1	2	7	6	15	32%	51%
Total 49	1	2	17	10	19	40.8%	61.2%

APPENDIX U (ii) (b)

LOWER CERTIFICATE OF EDUCATION EXAMINATION

HASSANAL BOLKIAH AND RAJA ISTERI ANAK DAMIT

ARABIC SECONDARY SCHOOL 1972

Number of Candidates		Grade				Percentage of Passing A-B-C
		A	B	C	D	
Male	16	4	-	3	9	44%
Female	57	11	1	6	39	32%
Total	73	15	1	9	48	38.2%

APPENDIX V

RELIGIOUS TEACHER'S COURSE EXAMINATION UNTIL 1972

Years	Passed	Male	Female	Failures	Total
1966/1967	42	34	8	7	49
1967/1968	44	14	30	4	48
1968/1969	46	14	32	5	51
1969/1970	30	9	21	8	38
1970/1971	42	9	33	9	51
1971/1972	48	9	39	-	48
Total	+252	89	163	*33	285

(* This total is exclusive of those who passed the repeated examination)

SOCIAL DEVELOPMENT

STATEMENT ON RELIGIOUS ADULT CLASSES 1972

District	No. of classes			Total Class	No. of students		Total Students	No. of teachers		Total Teachers
	Men	Women	Mixed		Men	Women		Men	Women	
Brunei/Muara	29	60	7	96	760	1,723	2,438	36	25	61
Belait	9	18	-	27	169	346	515	18	4	22
Tutong	6	17	7	30	210	420	630	19	7	26
Temburong	7	13	6	26	376	388	764	21	2	23
Jumlah	51	108	20	179	1,515	2,877	4,392	94	38	132

SOCIAL DEVELOPMENT

APPENDIX W (u)

STATEMENT ON QURAN ADULT CLASSES 1972

District	Number of Classes			Total		Number of Student		Total Student	Number of Teachers		Total Teachers
	Male	Female	Co-education	Class	Male	Female	Male		Male	Female	
Brunel/Muara	24	27	12	63	630	1,141	31	1,771	14		45
Belait	5	6	-	13	104	132	17	236	3		19
Tufong	6	9	7	22	168	210	11	378	3		14
Temburong	2	5	3	10	103	136	9	239	1		10
Total	37	49	22	108	1,005	1,618	68	2,623	20		88

SOCIAL DEVELOPMENT

APPENDIX X (I)
STATEMENT ON PICTURE: ISSUED BY RELIGIOUS AFFAIRS DEPARTMENT INFORMATION SECTION 1972

Sizes of Pictures	For Newspapers, Magazines, And Printing	For Schools And Colleges	For Exhibition In the Outside the state	For Mosques And Dept.	For Special Persons
20" x 24"	-	55 pieces	12 pieces	12 pieces	170 pieces
12" x 15"	-	-	15 pieces	-	45 pieces
8" x 10"	1,085 pieces	20 pieces	34 pieces	62 pieces	1,199 pieces
6½" x 8½"	1,901 pieces	28 pieces	45 pieces	24 pieces	802 pieces
Post Card	-	580 pieces	-	-	420 pieces
Total	2,986 pieces	663 pieces	157 pieces	98 pieces	2,636 pieces
				Total: = 6,540 pieces	

SOCIAL DEVELOPMENT

APPENDIX X (II)

STATEMENT ON FILM SHOW AND RELIGIOUS LECTURES 1972

Year	District	Total of Shows	Total of Lectures	Total of Kampong visited	Total of Films	Total of Shows
1972	Brunei/Muara/Temburong District.	55 times	35 times	55 times	250 reels	24,550 persons
1972	Temburong District.	25 times	23 times	25 times	30 reels	5,650 persons
1972	Tutong District.	44 times	44 times	44 times	240 reels	12,130 persons
1972	Belait District.	44 times	44 times	44 times	214 reels	14,330 persons
	Total	163 times	168 times	168 times	794 reels	56,710 persons

APPENDIX X (iii)

STATEMENT ON RELIGIOUS PROGRAMME ON RADIO 1972

Year	Qur'an Translations	Religious Lectures	Religious Problems	Religious Kindergarten	To Recognise the Religious of Islam
1972	50 times	50 times	25 times	27 times	53 times
Total	50 times	50 times	25 times	27 times	53 times

SOCIAL DEVELOPMENT

APPENDIX X (iv)

STATEMENT ON INFORMATION PUBLICATIONS 1972

Religious Affairs Dept. Magazines	Translation Magazines (12 Issues)	Published in news-papers Pictures during:	Book (3 Issues)	Calendar (2 Issues)
Number 27	No. (1)	1. Prophet Mohammad Celebration	1. "Mimbar Hadith"	1. Takwin Bulanan, 1972/ 1392.
and	to	2. Isra'/Me'raj Celebration.	2. "Seruan Mimbar"	2. Takwin Mingguan, 1972 1392.
Number 28	No. (12)	3. Nuzul Al-Quran Celebration	3. "Banatkah Ugamma	
		4. Return of Pilgrims to the country.	Islam Steik dan Konserbatif?"	
		5. Pilgrims departing for Mecca		
		6. And others.		

CHAPTER 9

LAW AND ORDER

(a) POLICE

PART I

GENERAL REPORT AND SURVEY FOR THE YEAR 1972

1. The year 1972 was a quiet one with no particular incidence of Crime requiring special comment.

PART II

ESTABLISHMENT AND STRENGTH

2. Comparative figures for the last three years of the approved establishment and actual strength of the Force are set out at Appendix I. The distribution of the approved establishment is set out at Appendix II.

TRAINING

3. (a) Increased accommodation and facilities enabled the Training Centre to widen the scope of training activities by introducing new courses and giving greater attention to the initial training and refresher courses which are the basic requirement of the Force. During the year there were held Recruit Basic Training Courses (28 weeks), Constables' Refresher Courses (8 weeks), SPOs (Sgts/Cpls) Refresher Courses (8 weeks), Officer Cadet Basic Training Course (32 weeks), Signals Basic Training Courses (14 weeks), Signals Regarding Courses (4 weeks) and an Assessment Course for Potential Officer Candidates (1 week).

LAW AND ORDER

(b) Planning was completed for an enlarged training programme for 1973 to include Driver Training at Basic, Refresher and Reclassification levels, CID Refresher Courses, Junior Officers' Refresher Courses and a larger Recruit intake.

(c) Attendance at Courses during the year was as follows:-

(i) Recruit Basic Courses	175 Recruits
(ii) Officer Cadet Basic Courses	5 Officer Cadets
(iii) Potential Officer Assessment Courses	17 Candidates
(iv) Constables' Refresher Courses	148 P.C.s
(v) Cpls/Sgts. Refresher Courses	38 Sgts/Cpls
(vi) Signals Basic Courses	20 P.C.s
(vii) Signals Regrading Courses	8 P.C.s

(d) In addition to all aspects of Police duties Courses for Recruits and Officer Cadets included training in Judo , Life Saving and First Aid, Refresher Courses including Life Saving and First Aid as did Signals Basic Courses. The Training Centre also supervised training in Judo, Life Saving and First Aid in the Reserve Unit. The following figures give some indication of the extent of this aspect of training :-

(i) **Judo**

yellow belts awarded-

Recruits	72	
Officer Cadets	5	
Staff	1	
Reserve Unit	<u>13</u>	<u>91</u>

LAW AND ORDER

Orange Belts awarded-

Recruits	61	
Officer Cadets	5	
Staff	2	75
Reserve Unit	<u>7</u>	<u>75</u>

Green Belts awarded -

Staff	<u>2</u>	<u>2</u>
-------	----------	----------

Blue Belts awarded -

Staff	<u>2</u>	<u>2</u>
-------	----------	----------

Total		<u><u>170</u></u>
-------	--	-------------------

(ii) Life Saving

Intermediate Certificates Awarded

Recruits	91	
Officer Cadets	5	
Staff	2	
PC. Refresher Courses	29	
Signals Basic Courses	1	
Reserve Unit	<u>30</u>	<u>158</u>

Bronze Medallians Awarded

Recruits	73
Officer Cadets	1
Staff	2

LAW AND ORDER

PC . Refresher Courses	15	
SPO Refresher Courses	4	
Signals Basic Courses	1	
Reserve Unit	<u>30</u>	<u>126</u>

Bars to Bronze Medallions Awarded

P.C. Refresher Courses	56	
Reserve Unit	<u>35</u>	<u>91</u>
Total		<u>384</u> ===

(iii) First Aid

Practical First Aid Certificates

Recruits	101	
Officer Cadets	5	
PC Refresher Courses	97	
SPO Refresher Courses	25	
Signals Basic Courses	10	
Reserve Unit	<u>17</u>	
	<u>255</u>	<u>=====</u>

LAW AND ORDER

TRAINING OVERSEAS

4. During the year the following have attended courses:-

One Inspector attended Airport Courses UK, Singapore, Kuala Lumpur and Hongkong.

Three Inspector Attended a Drug Course in Singapore.

One Gaxetted Officer attended an SB Course in London.

Two SPOs attended an Army Drill Course in UK.

Three Band Police Constables attending Musical Courses at the Royal Military School of Music, UK.

RECRUITING

5. Two recruiting exercises were carried out during the year. A large number of young men continue to offer themselves for service in the Force and a notable feature of recent recruiting has been the very much higher educational standards of the young men now available and the generally increased physical attributes of men accepted.

EDUCATIONAL VISITS

6. Visits to establishments and installations of other Government Departments and other places of interest, including the Seria Oilfield continue to take an important place in all course programmes at the Training Centre. A total of 62 such visits involving all ranks passing through courses took place during 1972.

7. Visits by schools to the Training Centre continue to be encouraged as an aid to future recruiting.

FORCE WEAPON TRAINING

8. Range Classification Courses for all ranks of the uniformed branches of the Force were arranged during the year in the Self Loading Rifle, Heavy Self Loading Rifle, Sterling and Revolver. All courses were fired at temporary ranges pending completion of the ranges still under construction at the end of the year.

FORCE EXAMINATIONS

9. A new syllabus of Force Examinations, conducted by the Training Centre, was introduced during the year to reflect the increasingly high educational standards of the Force as a whole. Early in the year the First Class Certificate of Education Examination was Modified. In December the last examinations in the old syllabus of First Class Certificate of Education (for Constables), Lower Standard (for Constables and Corporals), Standard I (for Probationary Inspectors) and Standard II (for Inspectors) were held.

10. The new syllabus consists of a Second Class Constables' Examination (the final examination in the Basic Recruit Course), a First Class Constables' Examination (as a qualification for advancement to First Class Constable not earlier than one year after completion of Recruit training), a Corporals' Examination (as a qualification for promotion to thank rank), a Sergeants' Examination (open to those who have passed the Corporals' Examination), a Probationary Inspectors' Examination (the final Examination in the Officer Cadets' Course and also open to members of the rank and file who have passed the Sergeants' Examination), an Inspectors' Examination (open to those who have passed

LAW AND ORDER

the Probationary Inspectors' Examination) and a Senior Inspectors' Examination (open to those who have passed the Inspectors' Examination).

11. All examination include written papers in Penal Code , Criminal Procedure Code, prescribed Enactments Police General Orders and Police Deties. Rank and File examinations include papers in General Knowledge and Corporals' examinations include practical tests in Drill. Sergeants' Examinations also include practical tests in riot drill . Officers' examinations include practical tests in drill, riot drill and weapon training.

INSPECTORS

12. Two members of the Rank and File were promoted to the rank of Inspectorate. There were three Inspectors enlisted during the year.

CASUALTIES

13. A comparative table is given below showing the number of men who have left the Force for various reasons during the last three years:-

CAUSE OF LEAVING	NUMBER OF CASUALTIES		
	<u>1970</u>	<u>1971</u>	<u>1972</u>
Death	-	1	1
Desertion	-	-	-
Dismissal	19	13	6
Discharged/Medical Grounds	-	-	1
Discharged/Unable to become efficient	4	5	1
Resigned while under training	-	2	3
Other Resignations	1	-	2
Transferred to other Departments	-	1	1

LAW AND ORDER

Resigned on completion of Agreement	8	4	1
Retired on Pension	8	4	4
	<u>40</u>	<u>30</u>	<u>20</u>

LENGTH OF SERVICE

14. The length of service of all ranks is as follows:-

	<u>1970</u>	<u>1971</u>	<u>1972</u>
Under 5 years' service	397	483	352
5 to 9 years' service	196	212	276
10 to 14 years' service	182	184	171
15 to 19 years' service	51	90	161
20 to 24 years' service	40	41	44
25 years' service and over	12	19	31
	<u>878</u>	<u>1029</u>	<u>1035</u>

CLERICAL STAFF

15.

Clerical Staff	<u>Establishment</u>	<u>Strength as at 31.12.72</u>
Confidential Secretary	7	4
Financial Assistant	1	1
Clerk Grade 'B' Supercalc I	1	1
Clerk Grade 'B'	21	18
Clerk Grade 'A'	4	3
Stenographer	3	3
	<u>37</u>	<u>30</u>

LAW AND ORDER

OTHER CIVILIAN APPOINTMENTS

	<u>Establishment</u>	<u>Strength as at 31.12.1972</u>
Director of Music	1	1
Clerk Translators	5	4
Assistant Archivist	1	1
Assistant Registrar	2	1
Religious Teachers	2	-
Peons	8	8
Cooks	26	19
Gardeners/Cleaners	37	31
Storekeeper Gd 1	1	1
Technical Storeman Gd II	1	1
	<hr/>	<hr/>
	<u>84</u>	<u>67</u>
	=====	=====

EXPENDITURE

16. The following table shows the cost of the Police Force during the year 1972:-

	<u>Estimated Expenditure</u>	<u>Actual Expenditure</u>
Personal Emoluments	\$ 7,605,051.00	\$6,742,590.13
Other Charges (Annual Recurrent)	\$ 1,283,517.00	\$1,053,526.47
Special Expenditure	\$ 1,464,998.00	\$ 485,097.79
	<hr/>	<hr/>
	<u>\$10,353,566.00</u>	<u>\$8,281,214.39</u>
	=====	=====

LAW AND ORDER

17. Under Special Expenditure there is a sum which is not included, this being for Crown Agents Indents and Local Indents, not yet billed.

POLICE REWARD FUND

18.	Balance as at 31.12.1972	\$51,333.33
	Spent in 1972	\$ 3,005.95

PART III

BUILDING S

19. The final building phase at Seria and Kuala Belait Police Stations was completed during the year.

20 Extensive alterations to enlarge the living areas in the married quarters at Panaga Police Station started during the year and one block is almost completed. Three other blocks are scheduled for alterations. The building of a new bachelor block also commenced and is scheduled for completion in early 1973.

21. Tutong Police Station, Married Quarters and Bachelors Block was completed and occupied during the year. Work has started on the house for the Officer commanding this Station and is due for completion early 1973.

22. The new Police Station and Married Quarters at Muara were completed during the year and will be occupied early in 1973. The married quarters include several units for the men who are to police the new port at Muara when it comes into operation in 1973.

23. Building commenced as expected on the two multi million dollar projects for the Reserve Units at Gadong and Panaga and are progressing as planned. The unit at Gadong is being built in one phase and is ahead of the scheduled completion date which is April 1974. The unit at Panaga is being built in two phases. The first phase is due for completion early 1973 and tenders are to be called for the second phase in early 1973.

24. Development work at the Police Training Centre continued as planned during the year. This included extensive site preparations and earth works and the commencement of buildings to provide additional accommodation for students and staff. The majority of this scheme which includes a 100 yard range, playing fields, internal roads, etc. is scheduled for completion in late 1973 and the remainder of the scheme in 1974. The Officers' Mess and additional classrooms were completed and occupied during the year.

25. Building of the first phase of Brunel Police District Headquarters which consisted of a seven story block of married flats started early in the year and is progressing as planned. Work also started on Phase 2 which is a repeat of Phase 1. These two blocks of flats which will be serviced by a lift are scheduled to be completed in June and November 1973. Plans for the Police Station and administration offices are well under way.

26. Six Officers' houses and a Combined Operations Centre building at Police Headquarters Gadong were completed and occupied during the year.

27. Work commenced on a Police Station, married quarters and an officer's house for the policing of the new Brunel

LAW AND ORDER

International Airport. These buildings are scheduled to be completed in April 1973, slightly ahead of the time the new airport is to be fully operational.

28. Tenders for the building of a new Police Station, married quarters, bachelors block and officer's house for Temburong were called for during the year and work is expected to commence in 1973.

CEREMONIALS

29. During the year the following Ceremonial Parades were held:-

- (i) 3rd June, 1972 to celebrate the Birthday of Her Majesty the Queen.**
- (ii) 15th July, 1972 the celebration of the Birthday of His Highness the Sultan of Brunei.**
- (iii) Additional Paradas were held for the opening of the High Court.**

LEGISLATION

30. Nothing upon which to comment.

PART IV

CRIME

31. Total number of reports received in the State was 4,256 as compared with 3,677 in 1971 and 3,699 in 1970.

32. The following figures represent crime committed against property and persons:-

LAW AND ORDER

	<u>1970</u>	<u>1971</u>	<u>1972</u>
Robbery	3	-	3
House-breaking	85	80	199
Theft	243	328	312
Extortion	-	2	3
False pretences	14	11	35
Grievous Wounds	13	-	3
Simple Assaults	107	378	316
Murder	2	-	-
Rape	-	1	2

33. The number of cases in which convictions were obtained decreased from 26% in 1971 to 24% in 1972.

34. Arrests for gambling show an increase of 33 persons arrested against only 6 persons in 1971. Under the Dangerous Drugs Enactment 7 persons were arrested and convicted against 8 in 1971.

35. The increases in house-breaking and false pretences are due mainly to the number of illegal immigrants, mainly Ibans, who entered the State to look for employment on development projects, and who resorted to crime when they failed to obtain employment. An added factor was again the complacent attitude of the public in general towards the protection of property.

CRIME RECORDS OFFICE

36. This office has 3,042 sets of prints in the main collection excluding prints of the Royal Brunei Malay Regiment and the Royal Brunei Police Force. The number of first offenders registered was 233.

LAW AND ORDER

37. A total of 571 enquiries and searches were made, 50 of which resulted in identification. In addition searches were made in respect of candidates for employment in Government Departments, applications for British Passports and citizenship, and for entry permits.

38. Visits to scenes of crime were made in 15 serious cases.

39. One sergeant and one corporal attended a 6 months course on fingerprints at the Fingerprint Bureau in Kuala Lumpur.

TRAFFIC

40.

Accident Statistics	<u>1970</u>	<u>1971</u>	<u>1972</u>
Total number of accidents	1150	984	974
Number of fatal accidents	22	17	34

41. **Classification of accidents in 1972**

<u>Minor</u>	<u>Slight</u>	<u>Serious</u>	<u>Fatal</u>	<u>Total</u>
520	356	64	34	974

42. These figures reveal a slight decrease in the total number of accidents as compared with 1971, but the numbers of persons killed and seriously injured doubled. There were 2 accidents in which 7 persons died. The number of accidents is still at a high level compared with the number of vehicles registered in the State. This is attributed to many factors, the main one being the increasing number of young inexperienced drivers who drive recklessly and who

LAW AND ORDER

generally ignore traffic signs and the rules laid down in the Highway Code. Police preventative measures include highway patrols, speed traps, and snap checks on driving licences, excessive loading, and the condition of vehicles. A total of 3,078 speeding offences were detected in 1972, and about 400 cases were filed as the offenders had either left the state or could not be traced at the addresses given in driving licences and N.R.I.C 's before summonses or compound notices could be served on them.

SPECIAL BRANCH.

43. Intelligence gathering activities were maintained on a State-wide basis. The rural APO screen continued to prove its effectiveness during the course of the several combined Police/Military and Commando exercises held during the year.

44. The Special Branch Training School throughout the year provided in-service training courses for Inspectors and Rank and File.

45. The Permanent Escort Section (PES) continued to operate under Special Branch control and is now an integral part of Istana Functions and routine.

PART V

BAND

46. The Band were engaged on 84 occasions.

LAW AND ORDER

RADIO BRANCH

VHF COMMUNICATIONS

47. All Police Stations in the State have been equipped with VHF radio equipment. A number of Police Posts located within range of the main station transmitters have also been installed bringing the total of VHF fixed stations to 36.

48. The Force now has a total of 52 vehicles fitted with VHF Radio telephones employed on a wide range of duties including, VIP Escorts, Reserve Unit, Traffic, and General Duties.

49. The increase of equipment in service has placed a corresponding load on our maintenance section, which has coped with the problem efficiently.

HF COMMUNICATIONS.

50. Consequent to the increased distribution of VHF stations, our HF stations have been reduced to 16, the majority of which are APO manned security Posts.

51. We do however maintain HF links between this HQ and Belait District Hq. and the Reserve Unit Companies and also to the neighbouring states of Sabah and Sarawak.

52. This means of communication is essential for patrol in remote areas, and the HF Packsets used for this type of communication have proved very effective in all parts of the State.

LAW AND ORDER

GENERAL

53. The transfer of our Signals Control into the recently completed Combined Operations Room was successfully concluded in December. The transfer necessitated the deplication of all control systems in order not to disrupt radio services, this was undertaken by our maintenance staff, a smooth transition was achieved.

WORKSHOPS

54. In addition to the maintenance of the portable and fixed generators used to provide power for radio purposes, this Branch has been given responsibility for the repair maintenance of all Police outboard engines, and grass cutting machinery. The completion of the Transport Service Station, will facilitate servicing of these engines, by providing additional workshops, and spare parts storage.

TRANSPORT

55. Two Austin Mini Bus, 5 Landrovers, 1 Riot Vehicle, 1 Truck, 2 Holden Saloon Cars were purchased during the year.

56. One Bus, 1 Truck, 2 Landrovers and 1 motorcycle were written off during the year.

RESERVE UNIT

REORGANISATION

57. The reorganisation of the Reserve Unit, which continues to be under the command of the Commandant, Training Centre, continued during the year.

LAW AND ORDER

58. The Public Order role of the Unit was reviewed and changes were made in the riot formations to provide for two Riot Companies, each with two Riot Troops.

TRAINING,

59. Training in all aspects of Reserve Unit duties continued throughout the year.

60. As a result of changes in current thinking on Public Order duties riot drills and anti-riot action as a whole were reviewed and altered. The two Companies have completed training in this and will provide training teams early in 1973 to teach new drills and methods throughout the Force.

ARMS AND MUNITIONS

61. Considerable changes were made in the armament of the Unit for Public Order duties. CS became the basic gas shell and grenade fill and rubber baton shells were introduced. Experiments with other items were carried out.

DUTIES

62. The Unit continued to provide personnel for a number of ceremonial occasions including parades to celebrate the Birthday of H.M. The Queen and H.H. The Sultan, Guards of Honour, Passing out Parades at the Training Centre, etc.

63. Throughout the year the Unit assisted Districts by providing personnel to assist with crowd control at various events and functions, in carrying out escort tasks, etc.

LAW AND ORDER

PART VI

WELFARE AND RECREATION

64. Supplies of sports equipment are adequate.
65. Films were screened at all Stations and the Reserve Unit twice a month.

HEALTH

66. The general health of the Force remained satisfactory.

HONOURS

67. His Highness the Sultan honoured eight members of the Force with various awards, and Her Majesty the Queen, four.
68. All members of the Force were awarded the 50th Anniversary Police Medals.
69. Two members of the Force were awarded the Safe Driving Badge.
70. Eighty-five members of the Force donated blood during the year.

SOCIETIES

71. The Commissioner of Police, in his capacity as Registrar of Societies, registered 16 new Societies during the year- 5 registered Societies ceased to function.

LAW AND ORDER

CONCLUSION

72. The training and re-training of the Force continues to be a first priority, together with the provision of adequate accommodation to allow immediate availability of manpower.

73. Essential buildings and facilities at the Police Training School are in the course of provision and should allow for on completion, all necessary basic training and re-training within the State.

74. The provision of a part of the accommodation necessary for Police personnel in the Brunei Police District generally, is under way. This should on completion permit a greater Police effectiveness with the Police District than has so far been possible.

APPENDIX I

COMPARATIVE FIGURES FOR THE LAST 3 YEARS OF APPROVED ESTABLISHMENT AND ACTUAL STRENGTH OF THE FORCE AS AT 31ST DECEMBER, 1972

	Establishment			Strength		
	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>
Gazetted Officers	27	31	32	24	27	28
Inspectors	57	64	71	55	53	55
Sgt/Majors	6	8	8	5	7	8
Sergeants	60	78	80	49	64	64
Corporals	130	170	189	120	144	170
Constables/Recruits	617	790	844	625	734	810
	897	1141	1224	878	1029	1135

LAW AND ORDER

In which is included the Band:-

BAND

Director of Music	1	1	1	1	1	1
Inspector	1	1	1	1	1	1
Sgt/Major	1	1	1	1	1	1
Sergeants	4	4	4	4	4	4
Corporals	10	10	10	10	10	10
Bandsmen	45	45	45	45	45	45
	<hr/>			<hr/>		
	62	62	62	62	61	67
	<hr/>			<hr/>		

LAW AND ORDER

APPENDIX II

DISTRIBUTION OF FORCE ESTABLISHMENT AS AT 31ST DECEMBER, 1972

	Commissioner	Dy. Commissioner	Asst. Commissioner	Snr. Superintendent	Superintendent	Dy/Asst./Supt.	Chief Inspector	Snr. Inspector	Insp./P/Insp.	Sgt. Major	Sergeant	Corporal	Constable
Royal Police Force Headquarters													
Headquarters	1	1	1			2			3		3	9	23
Band								1	1	4	10	45	
Reserve Units						1 1		2 2		5 5	15 15	56 56	
Q.M. Store								1		1	1	3	
Training				1	2	6		10	1	10	12	94	
Crime						1		3		2			
SB/HQ & DIST HQ			1	1	3	5		2	20	1	12	28	26
Permanent Escort Section							1	2		2	9	44	
Radio Branch					1	1		2		2	4	22	
Brunel district													
Uniform Branch					1			12	2	15	45	248	
Radio Branch										1	1	9	
Transport Branch											2	9	
Belaït District													
Uniform Branch					1		1	7	2	12	32	172	
Special Branch					1			2	1	3	3	4	
Radio Branch										1	1	9	
Transport Branch										1	2	24	
TOTAL:	1	1	2	2	9	17	1	3	67	8	80	189	844

LAW AND ORDER

b) PRISONS

The State's Rumah Penjara at Jerudong has an accommodation for 100 prisoners. Female prisoners are accommodated in the Barrack Quarters which has been converted and adopted for use as a female prison. There is also a separate accommodation for juvenile offenders. In addition, there are several small prisons and lockups in the State under the charge of Police.

The Superintendent of Prisons is the head of department and is responsible for the penal administration in the State.

During the year under review one Warder resigned on completion of agreement.

The length of services of all ranks in the Prisons Department was as follows:-

Under 5 years service	27
5 to 9 years service	8
10 to 14 years service	11
15 to 19 years service	2
20 years service and over	3
	<hr/>
	51
	<hr/>

The following is the summary of the budget estimate for the year under review:-

(i)	Total personal Emoluments	\$270,739.00
(ii)	Total Other Charges Annually	
	Recurrent.	83,300.00
(iii)	Total Special Expenditure	\$127,100.00
		<hr/>
	Total:	\$481,139.00
		<hr/>

LAW AND ORDER

A total of \$4,769.85 was collected from sale of prison industries.

Vocational guidance and education are conducted to cultivate the spirit of labour and to give inmates the knowledge necessary for their vocations and eventually to lead them to create a resolution of self support by their own labour.

Male prisoners are assigned to various jobs, namely carpentry, gardening, simple farming, cooking and cleaning of the prison compound and buildings. They are assigned to any one of these jobs in accordance with their ability, character and adaptability. Female prisoners are employed on household duties and under take sewing and mending as occasion demands.

Apart from vocational training, prisoners are encouraged to attend Malay-medium classes in the prison. Classes are conducted three times a week by the Education Department.

Muslim prisoners are given facilities to say their prayers in the prison itself and during the month of Ramadhan they are allowed to observe the fast. Other non-muslim prisoners are allowed to follow their religious observations in the prison if they so desire.

Every evening inmates are allowed to play games such as badminton, volley ball, pingpong and sepak raga.

The Prison has a small library where reading materials in Malay, English and Chinese are provided and are very popular. Radio listening is permitted daily and film shows are given fort-nightly.

LAW AND ORDER

A senior Hospital Assistant paid two visits a week to the prison and give treatment to prisoners whenever required. Emergency or serious cases are brought to the General Hospital for treatment. During the year under review one prisoner died in the General Hospital.

Visiting Justices made frequent visits to the prison. They received no major complaints from the prisoners and reported favourably on the prison compound and building and the treatment of prisoners.

Visiting Justices appointed for the year 1972 were :-

1. Awang Ya'akub bin Ahmad
2. Awang Ahmad Wally Skinners
3. Pengiran Idris bin Duli Pengiran Temenggong Haji Mohammad.
4. Awang Adnan bin Marsal.
5. Pengiran Haji Kamaluddin bin Pengiran Haji Metassan.
6. Awang Abdul Razak bin Mohammad
7. Awang Lau Chin Hung.
8. Awang J.W.H. Cardoza.
9. Awang Mohammad bin Haji Serudin.
10. Awang Danial bin Haji Hanafiah.
11. Awang Abdul Saman bin Kahar.
12. Awang Anthony Newn.

Juvenile Offenders are sent to Rumah Penjara Jerudong and the Sarawak Boys' Home for detention. During the year under review one offender was discharged from the Sarawak Boys' Home.

A Boys' Home for the detention of Juvenile offenders has not yet started although the sum of \$500,000/= have been approved. A new 12.11 acres site at Kampong Bukit

LAW AND ORDER

Bunga Jerudong has been provided to replace the old 5 acres site at Gadong.

No prisoners escaped during the year under review.

There were no executions.

Prisoners are classified as follows :-

Recidiviats ;

First offenders ;

Female offenders ;

Under remand ;

and young prisoners.

The following gives the classification by race, age group and length of sentence for the year under review :-

(i) Classification by race :

Malay	61
Chinese	23
Iban	159
Other	24
	<hr/>
	267
	<hr/> <hr/>

LAW AND ORDER

(ii) Classification by age group :

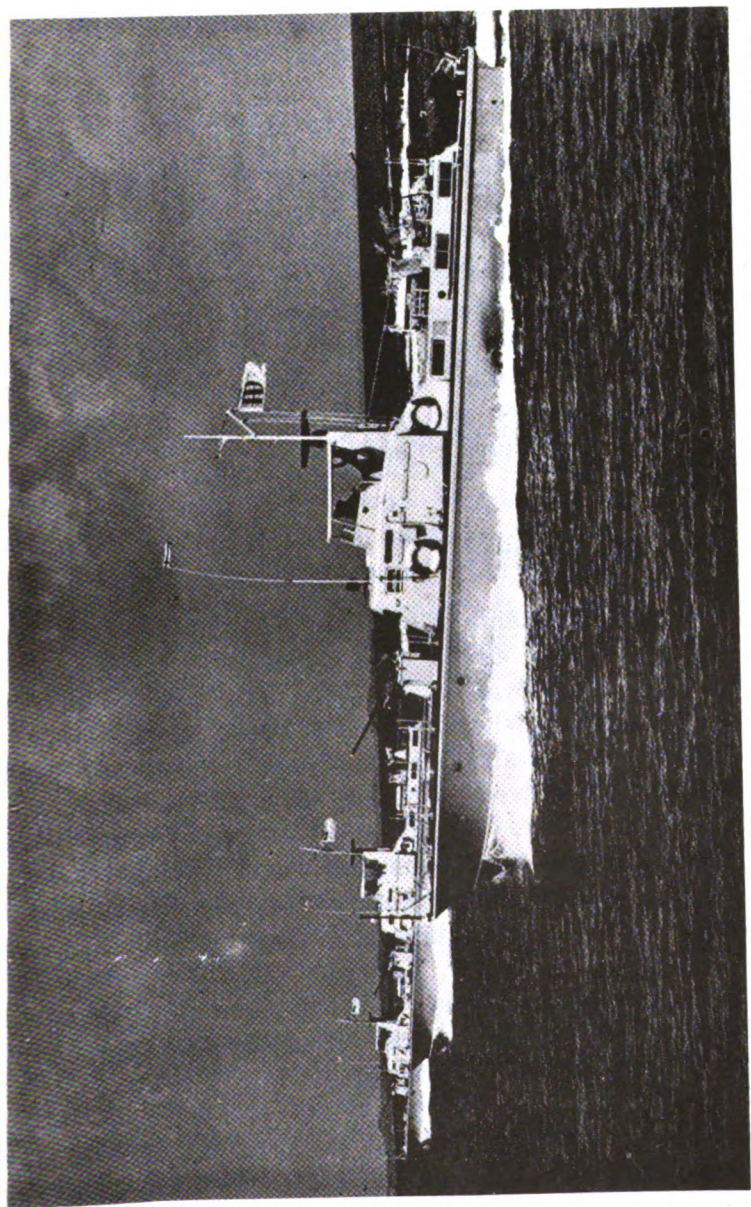
20 years & under	-	119
21 years to 30 years	-	94
31 years to 40 years	-	32
41 years to 50 years	-	14
Over 50 years	-	5
Unknown	-	3

Total	267
-------	-----

(iii) Classification by Sentences :

Under Remand	-	110
Under 1 month	-	97
1 to 6 months	-	53
7 to 12 months	-	6
13 to 24 months	-	1
Over 2 years	-	

Total	267
-------	-----



THE RAJA ISTERI CLASS COASTAL PATROL BOATS WITH KDB NORAIN
ON THE FOREGROUND

(c) ROYAL BRUNEI MALAY REGIMENT

General

Command of the Regiment changed in December 1971 when Colonel Dato JJH Simpson was relieved by Colonel Dato BFL Rooney. The highlights of the year were the Regiment's full participation in all the ceremonies during visit of Her Majesty Queen Elizabeth II to Brunei on 29 February, and the Company Training in Hong Kong in August-September. Some changes were made in the Regiment's organisation and establishment to take account of the expansion and future roles.

Organisation and Personnel.

The main components of the Regiment, which, until 31 March 1972, was known as the Task Force, was redesignated First Battalion, the Royal Brunei Malay Regiment. Following this redesignation the Regimental Headquarters which shared offices and staff facilities with the former Task Force Headquarters hived off part of the staff and became a separate Headquarters. The First Battalion Headquarters moved into new accommodation built for it. The original Headquarters building then accommodated the Regimental Commander's staff, consisting of a General Staff Officer Grade 2 (GSO 2), a Deputy Assistant Adjutant General (DAAG), a Deputy Assistant Quarter Master General (DAQMG), a General Staff Officer Grade 3 (Signals GSO 3 sigs) and a Staff/Regimental Paymaster.

With the establishment of the First Battalion, the Air Wing, which hitherto had been a sub-unit of the Task Forces, became an independent sub-unit under the direct command

of Regimental Headquarters. The Sultan's Flight lost its sub-unit status and became part of the Air Wing.

The strength of the Regiment at 31 December 1972 was approximately 90 officers and 1400 other ranks. During the year, 233 recruits were trained by the Depot and Training Wing. A Regimental Committee was appointed to draw up an establishment for all components of the Regiment to cover the period up to 1975. This establishment was subsequently approved by His Highness The Sultan and became effective in November 1972.

The expansion of the Regiment necessitated an increase in the medical and dental cover for families and soldiers alike. As these could not be provided through loan service officers the services of a medical officer and dental officer were obtained by employing United Kingdom civil practitioners on contract. A language laboratory has also been added to meet the increased demand in language teaching that worldwide attendance on courses has made essential.

In September, the Regiment was greatly honoured by His Highness The Sultan when he conferred on Yang Teramat Berhormat Pehin Orang Kaya Laila Setia Bakit Di-Raja Dato Laila Utama Awang Isa bin Dato Haji Ibrahim an Honorary Commission in the Regiment in the rank of Lieutenant Colonel.

Training

The beginning of the year was a busy period calling for state wide preparations for the visit of Her Majesty The Queen. Training opportunities were consequently limited as most members of the Regiment were to play a part during the visit. The Regiment can justifiably be proud of its contributions to the historic occasion of the Queen's

visit in providing the Guard of Honour for Her Majesty's arrival at the Customs Wharf in Bandar Seri Begawan, security guards, soldiers to line the route, Equerries to the Royal Visitors and soldiers dressed in colourful traditional court dress to pull the golden coach in which both Royal Families made the journey from the Customs Wharf to the Lapau.

After the visit, the Regiment began the serious business of training. Towards the middle of March, a large scale exercise was launched in the Belait District. This exercise which lasted a fortnight was carried out jointly by the Regiment, the 6th Queen Elizabeth Own Gurkha Rifles, elements of the Royal Brunei Police Force and a visiting sub-unit of the British Army which was then was then training in the Far East.

A second Regimental sized exercise was carried but in early June, immediately after the Regimental Birthday and the Queen's Birthday Celebrations. This exercise took place in the Temburong District and the Brunei Bay area, again carried out jointly with elements of the Royal Brunei Police and a visiting sub-unit of the British Army.

The period July/August saw the Regiment occupied with ceremonial duties to celebrate the Birthday of His Highness The Sultan and later in August, the wedding of Yang Teramat Mulia Seria Paduka Pengiran Muda Jefri Bolkiah. However, towards the end of August, the Regiment was able to send a small Headquarters and two rifle companies for training in Hong Kong. The training took place mainly at the Sai Kung Peninsula in the New Territories and lasted for about one month. The personnel were transported to Hong Kong and back to Brunei in Royal Air Force aircraft and the HS 748 of the Sultan's Flight.

LAW AND ORDER

Great value was obtained from training in a different environment and the experience of operating tactically and logistically with British forces. It hope to provide similar training in future years.

On individual training overseas, the Regiment was able to secure more vacancies on courses in the United Kingdom. For the first time too the Regiment sent two officer cadets for naval training at Britannia Royal Naval College, Dartmouth. This is a first step towards getting professional local officers for the Regiment's Flotilla. Prior to this, Brunei officers went through an Army officer cadet school, and, after obtaining their commissions, served as infantry platoon commanders before going on for naval training and service with the Flotilla. The Regiment again sent an officer for staff training in the United Kingdom but this year only one vacancy was available at Staff College, Camberley. Two Brunei officers successfully completed the pilot conversion course at Bell Helicopters Co, Fort Worth, Texas, USA, and are now qualified to fly the twin-engined Bell 212 helicopters. Two other officers successfully completed the flying instructor's (Kiowa) course at the Canadian Forces Flying Training School, Manitoba, in October 1972.

The number of officers and soldiers who attended courses overseas in 1972 is summarised below :-

At	Officers	Other Banks
UK	26	25
Australia	3	-
Hong Kong	7	3
Singapore/Malaysia	2	1
USA	2	-
Canada	2	-

Civil Community Relations

The Air Wing continued to be of considerable service to the Government Hospital Flying Doctor's Service. During the year, the Regiment's helicopters carried out 2,671 sorties comprising 2,726 flying hours. Approximately fifty percentum of the flying hours was for the Flying Doctor's Service and medical evacuations from the rural areas, which averaged on a week .

The Regiment, through its Engineer Troop, was able to assist the local communities in minor works projects during the year. Unfortunately, because of the many commitments within the Regiment, the Engineers could not undertake many community projects but it is hoped to increase the number in the next and coming years. This type of work creates an excellent liaison with the rural people and at the same time forms a very valuable in service training for the Engineer Platoon. The Brunei Cadet Corps expended from four to seven platoons and it is now represented at the following schools:

- a. Sekolah Menengah Melayu SMJA
- b. SOAS College
- c. Anthony Abell College
- d. Maktab Melayu Paduka Seri Begawan Sultan
- e. Trade School, Kuala Belait
- f. Sekolah Menengah Melayu Muda Hashim, Tutong
- g. Sekolah Menengah Melayu Sultan Hassan, Bangar

The Regiment also embarked on training a number of school teachers with a view to giving them the responsibility of commanding these platoons. These, it is hoped, will be granted territorial commissions in the rank of Second Lieutenant and thereafter assume full command of the platoons in their own schools.

LAW AND ORDER

Equipment

Amongst major equipment purchased in 1972, were M16 rifles. All members of the Regiment are now armed with this modern automatic rifle. The 7.62 SLR are held in reserve and form the main equipment of the Brunei Cadet Corps.

The third Raja Isteri Class Coastal Patrol Boat, ordered in 1971, was launched by Datin Rosnah, wife of the General Adviser to His Highness The Sultan, at the Vosper Thornycroft Shipyard in Singapore in June 1972. The boat which was christened KBD NORAIN sailed to Brunei in company with her sister ships in August 1972.

The new Dental Centre became fully operational in September 1972. It is provided with hand picked modern equipment from Europe, the United States and Japan.

A number of major items were also purchased for the new Muara Marine Base. Phase One of the base is expected to be completed by early 1973.

Camp development

The inevitable problem that accompanied the Regiment's expansion was the shortage of married quarters both for officers and other ranks. To relieve the shortage, the Regiment acquired a number of hirings in the Bandar Seri Begawan area. In the meantime more married quarters were built in Berakas Camp. Serious thought was also given to the extension of Berakas Camp, and in October 1972 permission was given for the Regiment to acquire 243.80 acres of state and private lands as part of the Berakas Camp expansion scheme.

Approval in principle was also obtained to acquire state land along the Bangar - Batu Apoi Road in Temburong for a new permanent camp to replace the present temporary structured camp in Bangar. Work on the new Bangar Camp project is expected to begin in 1973.

A new Signals Centre complex was completed in August 1972 and the building was occupied by November. Work on the new Logistics Depot in Berakas Camp was started and this is expected to be completed by mid - 1973.

The Regiment is expanding and being provided with modern sophisticated weapons and equipment. Its training, both individual and collective, is necessarily becoming more ambitious and progressive to keep up with its roles and equipment to ensure that full value derived from the modernising process. It is an efficient, compact force of all services probably unequalled for its size anywhere in the world.

(d) FIRE BRIGADE

Approval was given for the construction of a fire station at Seria. This will be a great benefit to the Brigade at a time when the domestic risk in the area was causing concern and the activities of Brunei Shell Petroleum had increased to produce an additional fire risk in the New Oil Terminal. The protection of this risk will be a co-operative effort between the State Fire Brigade and the Brunei Shell Petroleum safety Department. The plans for the new station have been prepared by the Public Works Department and the building is expected to be opened late 1973.

A new phase in fire service establishment was the introduction of part-time fireman nominally to be called Additional Firemen. This small force of 12 men are to be

LAW AND ORDER

used at Bangar Fire Station in Temburong district where the risk, at present is quite low and the release of full time firemen for duty else where will help to ease the pressure at understaffed stations in other parts of the State.

It is with deep regret that the death of Fireman No. 22 Daim bin Safar is recorded. He was killed in a road accident while off duty and had served in the Fire Brigade for 8 years.

The Deputy Controller Awang Yaacob bin Hj. Mohd. Yusof attended various course in England the main accent being on Fire Prevention. He was in England for 5 months.

Emergency calls increased from 319 to 420 an overall increased of 32%. Much of this increase was caused by the long dry spell between May and August when 224 calls were received by the Brigade. It is encouraging to note a substantial increase in request to stand-by for controlled burning of vegetation but it is felt that not enough use is made of this service resulting in a number of unnecessary fires particularly in the dry spell went the resources of the Brigade were severely strained.

Operational Strength

The Brigade is still operating belows strength although another 13 recruits went into training school on 1st September, 1972. However 15 vacancies for Fireman existed and another recruiting drive was made during October.

LAW AND ORDER

1. Number & Type of Vacancies

Station Officer	- 4 vacancies
Assistant Station Officer	- 6 "
Fireman	- 15 "
Cook	- 1 vacancy

2. Promoted

To Station Officer

The following Assistant Station Officers promoted to Station Officers on one year probation w.e.f. 1st April, 1972 :-

1. A.S.O. Md. Yusof bin Ibrahim
2. " Md. Saad bin Talib

To Assistant Station Officer

The following firemen promoted to Assistant Station Officers on one year probation w.e.f. 1st January, 1972 :-

1. FN.No. 16 Ak. Kamaluddin bin Pg. A. Wahab
2. " 55 Mashod bin Hj. Abd. Rahman
3. " 32 Shamsudin bin Kuris
4. " 116 Hashim bin Hassan

3. Advance in class

Second Class Fireman No. 103 Dullah bin Bidin advanced to First Class Fireman w.e.f. 1st November, 1971.

LAW AND ORDER

To Second Class Firemen

The following Recruit Firemen advance to Second Class Firemen w.e.f. 1st June, 1972:-

1. Hassan bin Raya
2. Jaludin bin Talip
3. Ak. Hassim bin Pg. Tajuddin
4. Jaafar bin Said
5. Ak. Metussin bin Pg. Sabtu
6. Matyassin bin Moksini
7. Ahmad bin Hussein
8. Moksini bin Awang Chuchu
9. Japar bin Hj. Abd. Kahar
10. Tuah bin Duraman
11. Parseh bin Hj. Batang
12. Norsalam bin Hj. Jais
13. Ak. Sabtu bin Pg. Ismail
14. Amp. Aliumar bin Ap. Mayassin
15. Senin bin Gapar
16. Said bin Moksini
17. Ak. Alimas bin Pg. Metassim.

Building and Equipment

The projected opening of the Brunel Liquid Natural Gas (BLNG) plant at Lumut puts yet another high fire risk on books of the Fire Brigade and it now becomes obvious that a fire station will be required in this area. As it is 10 miles from Seria and attendance of under 30 minutes is well high impossible and this is too long a period for such a high fire risk. The attendance of three pumping appliances within 5 minutes should be the aim.

LAW AND ORDER

A new Operations Unit, two portable pumps and Breathing Apparatus were purchased during the year. The acquisition of a high pressure compressor and 24 sets of Breathing Apparatus will give a tremendous boost to the operating potential of the Brigade. The firemen of this Brigade are tough and well trained but are often beaten by smoky conditions. With this new apparatus they should be able to increase their efficiency but, of more importance, will derive great health benefits from the use of this equipment. Brigade Equipment is now as follows:-

Turntable Ladders	- 2
Pump Escapes	- 4
Pumps (including Land Rovers)	- 13
Trailer Pumps	- 9
Portable Pumps	- 11
Emergency Tender	- 1
Operations Unit	- 1
Hose/foam Lorry	- 1
Personnel/Equipment carriers	- 3
Water Tankers	- 2
Fire Floats	- 3
Speedboats	- 2
Breathing Apparatus	- 26 sets

LAW AND ORDER

SUMMARY OF CALLS

Type of Call	B. S. Begawan	Bangar	Kuala Belait	Muara	Tutong	Total
Domestic Premises	20	-	3	-	4	27
Commercial/Government	10	1	1	1	1	14
Jungle/Grass	55	7	80	25	58	225
Electrical	1	-	-	-	-	1
Miscellaneous	3	-	1	-	1	5
Motor Cars	7	1	3	-	9	20
Ship/Outboard Engine	1	-	2	-	-	3
Special Services	17	-	-	-	5	22
Special Jobs	53	15	6	4	7	85
False Alarm/Good Intent	2	1	8	1	-	12
False Alarm/Malicious	2	-	1	2	1	6
Total	171	25	105	33	86	420

LAW AND ORDER

The following increase over last year are to be noted:-

Domestic fire increased from	16	to	27
Jungle/Grass	from 188	to	225
Special Requests	from 16	to	85

OVERSEAS TRAINING

In England

Deputy Controller of Fire Brigade Yaacob bin Hj. Mohd. Yusof underwent Fire Prevention Training in the United Kingdom at various centres under the auspices of the British Home Officer for a period of 5 months w.e.f. 4th April, 1972.

Assistant Station Officer Jahari bin Ahad left Brunei for a 8 month Fire Prevention Course at the Fire Services Technical College on 26th December, 1972.

In Hong Kong

Assistant Station Officer Ak. Omar Ali bin Pg. Idris and Assistant Station Officer Ak. Ahmad bin Pg. Apong left on 4th December, 1971 to attend a six month officers course. A.S.O. Ak. Omar Ali bin Pg. Idris successfully completed his course but unfortunately A.S.O Ak. Ahmad bin Pg. Apong sustained a back injury during training and underwent an appendix operation in Hong Kong and it was considered wise to allow the man to return home before the completion of his course.

LAW AND ORDER

Deputy Controller faced a difficult theory course on Fire Prevention at the Fire Services Technical College in England followed by periods with Brighton and West Riding Fire Brigades to gain experience of the application of Fire Prevention within Brigade structure. Additional courses at the Technical College gave him an insight on Method of Instruction and Causes of Fire.

Local Training

Most of the year was taken up by recruit training for two courses at the beginning and the end of the year. The passing out parade of the earlier recruits demonstrated the high degree obtained by the new men.

The programme of refresher training has gone ahead vigorously and only a small proportion of fireman have yet to attend and this phase should be completed early in 1973. The next phase of refresher training will be delayed by the introduction of Breathing Apparatus training.

A very successful half day course was established for Government Officers on the operation and use of fire extinguishers. Many people who attend expressed a satisfaction from the course and in the year 1972 nearly 30 personnel attended one of these courses.

Fire Prevention

- 1) **Surveys** : A thorough and comprehensive examination covering every aspect of fire prevention and protection of the premises.

LAW AND ORDER

ii) **Specific** : A limited inspection confined to specific aspect of fire prevention. (e.g. safety in the use of household gas).

iii) **Routine** : A periodic inspection normally carried out at regular intervals.

Some 26 full surveys were carried out and full reports prepared. A further 9 full reports were made on drawings submitted for fire brigade requirements and recommendations.

Twenty eight specific surveys were made and this included inspecting 2 schools where gas is used. In addition 8 visits were made to assess the fire-fighting equipment required in new or altered premises.

Seven cinemas in Bandar Seri Begawan, Seri and Kuala Belait are inspected every month and reports made to the individual Board Chairman.

The maintenance scheme for extinguishers in Government premises has been continued and efforts are being made to check, catalogue and find that equipment which has been supplied by private contractors for Government schemes and have therefore been neglected in the past.

Fire of Special interest

A small petrol fire occurred at a filling station in Bandar Seri Begawan, when a motorist, ignoring the warning notice displayed at the site, kept his motor running while petrol was being dispensed. A small spillage of petrol ignited which was extinguished by the prompt action of an off-duty fireman using a foam extinguishers.

LAW AND ORDER

A petrol tanker at Sungai Liang was cooled down after it was discovered that a brake drum had overheated due to jamming of the brake. Damage was confined to the wheel and the tanks were not involved.

Two shop-house were destroyed by fire at Tutong during Chinese New Year. The fire, believed to be from an electrical short-circuit had gained a substantial hold behind closed, locked iron shutters and the pump from Tutong had a difficult time preventing fire from spreading to adjacent property one within 10 feet of the fire. Only when a 6 feet supporting pump arrived from Bandar Seri Begawan could an attack be made on the fire. Three jets were used to fight the fire.

A timber dwelling house was destroyed by fire at Kampong Medewa. The call was received at 03.10 hours in the morning and one jet was used to fight the fire. Shortage of water hampered the fire-fighters and damage was estimated at \$12,000.00.

A large shop in Jalan Chevalier Bandar Seri Begawan was severely damaged by fire, heat and smoke, the call being received at 5.55 a.m. on the 1st March. The fire believed to be from an electrical short-circuit caused damage to the rear of the premises and the fire burned through to the first floor which was extensively smoke logged. Two officers searched the upper parts of the pre-

LAW AND ORDER

mises using breathing apparatus and the premises were left in the hands of the Police at 10.00 a.m. Three jets were used drawing water from the lagoon of the Sir Omar Ali Saifuddin Mosque. Damage was estimated at \$25,000.00.

A house fire occurred near to Kuala Tutong on 24th March causing damage estimated at \$5,000.00. The fire probably caused by embers falling from a wood-burning stove involved a gas cylinder, which, not being turned off at the main valve, caused an intense fire within the kitchen area and the resultant complete loss of the house.

A fire occurred in a house on Kampong Ayer at 2.00 a.m. on the morning of 23rd March, 1972. The fire involving a kerosene lamp was promptly extinguished by the owner and only about \$10.00 damage was sustained. This could have had serious consequences if the fire had not been dealt with so quickly.

A call was received at 9.35 a.m. to a house fire at Mile 3 Jalan Tutong adjacent to the Municipal rubbish dump. Difficulty of access and the necessity of relaying water from the river nearby added to the problem of fighting a well established fire. Surrounding property was immediately protected and the fire contained within the building of origin. Four jets were used and damage was estimated at \$20,000.00.

LAW AND ORDER

The burning of grass at Mile 5 Jalan Berakas, Bandar Seri Begawan eventually got out of control and involved a small house close by. Damage was restricted to \$2,000.00 by the Brigade using one jet.

An unoccupied house at Kampong Junjongan at 10.33 p.m. on the evening of 22nd May, 1972 was involved in a fire which completely destroyed the house. The cause of the fire is a mystery as nobody had lived there for 3 weeks prior to the fire, which was discovered by a neighbour who ran a long way to a police post to report the fire. Damage was estimated at \$7,000.00 .

A gas leak from the tubing in the kitchen of the Rest House at Bangar ignited when a worker tried to light the gas stove. The fire was extinguished by turning off the main valve.

A restaurant in Bandar Seri Begawan was involved in a kitchen fire which spread into the fume ducting involving an extract and fan. Accumulated grease on the hood over the cooking range ignited and the fire spread up the duct, which discharged at roof level. The turnable ladder was pitched to the roof outlet in accordance with a predetermined routine and extinguished the fire in the upper part of the ducting and two further jets were got to work in the kitchen and the lower part of the extract system. Damage was restricted to \$1,200.00.

A leakage of gas in a bungalow at Seria presented a serious fire problem to both Brunei Shell Petroleum and the State Fire Brigades. A broken pipe allowed gas to escape, which was ignited by the burning gas ring. The fire made access to the main cock difficult but by the use of water spray extinction was effected with little fire damage to the structure and contents.

Two further house fires on the 15th July and the 1st August caused \$1,500.00 and \$2,500.00 worth of damage respectively.

One jungle/grass fire at Mile 8 Jalan Tutong involved an area of about one square mile. Much of the land was used for agriculture and a number of houses were sited within the area. Various changes of the wind spread the fire back and forth over the area the result of which the Fire Brigade had a very tedious job of continually resiting their pumps and equipment to deal with each new situation. The fire burned for 11 days and valuable help was rendered by the helicopters of the Royal Brunei Malay Regiment who transported many loads of water in their specialist water buckers slung under the aircraft.

Yet another unusual use of the Fire Brigade has been discovered and put to good use. To get piles for Marine use positioned quickly and accurately the Brigade was approached with the idea of blasting holes in river beds using high pressure water jets. A successful system was evolved and put to use a number of times during the year.

Many small fires are extinguished with beaters, extinguishers and hose reels. Larger fire involve the use of large water jets. Fires requiring large jets are classified as follows:-

LAW AND ORDER

<u>1 Jet</u>	<u>2 Jets</u>	<u>3 Jets</u>	<u>4 Jets</u>	<u>5 Jets</u>
54	27	6	3	1

Once again it must be put on record the valuable assistance the Brigade has received from the Police both in the manner in which the work was done and the esprit de corps existing between the two departments.

The enthusiasm, help and most valuable suggestions received from the Air Wing of the Royal Brunei Malay Regiment have who answer the Brigade's calls for help on many occasions must be put on record. The use of the water buckets under actual fire conditions has enabled the Air Wing to perfect their technique and greater efficiency has been the result.

Brunei Shell Petroleum have now established their new oil terminal at Seria and this has thrown up new problems for their Fire and Safety Department. However numerous and regular discussions between that Department and the State Fire Brigade has now produced an acceptable pre-determined procedure to be brought into use in the event of a major disaster at the terminal. This continuing close liaison has fostered a professional awareness between the two departments which is stimulating better relations on the fire ground. Their continued assistance at fires is greatly appreciated.

CHAPTER 10

COMMUNICATIONS

(a) Postal Services

Postal Offices and Facilities

The total number of Post Offices and Postal Agencies in the State at the end of 1972 was: 7 post offices and 3 postal agencies as compared with 7 post offices and 2 postal agencies in 1971. The seven post offices were the Bandar Seri Begawan Post Office, Muara, Bangar (in the Temburong District), Tutong, Seria, Kuala Belait and Labi Post Office and the Postal Agencies operated at Lumapas, Rambai and Kampong Kasat. Postal facilities including those of sales and encashment of money orders and British Postal Orders, parcel service and Savings Bank business were available at Bandar Seri Begawan, Kuala Belait and Seria Post Offices while the Muara, Bangar, Tutong, and Labi Post Offices dealt with the sales of stamps, the receipt and delivery of ordinary and registered letters only. The 3 agencies undertook the sales of stamps, receipt and delivery of ordinary and registered mail.

Postal Agencies

The Kampong Kasat Agency was opened in September 1972 providing the following postal facilities: stamp service, receipt and delivery of ordinary and registered mail. Unlike the Lumapas and Rambai Agencies, letters posted through the Kasat Agency were sent to the Bandar Seri Begawan Post Office to be postmarked before despatch. It was planned however to supply this Agency with a special date-stamp during 1973 bringing it in line with the other agencies in the state.

COMMUNICATIONS

Conveyance of Mails

Weekly surface mails to Brunei were landed directly from ships coming from Singapore and the sorting of postal items was done in G.P.O., Bandar Seri Begawan before distribution. In addition to these weekly surface mails, regular and daily airmail services were also maintained. As there were no commercial air services within the State of Brunei, mails to and from one post office to another in Brunei were conveyed by postal vans or outboard launches during 1972. As soon as the mails from outside countries were off-loaded in the two airports, they were carried to the respective destinations in the State within approximately 3 hours, with the exception of those addressed to Labi and the Temburong District. Letters posted in Singapore were therefore occasionally received by box users on the same day.

Riverine and Mobile Post Office

In 1972, there were four Riverine and two Mobile Post offices operating the State. The Riverine Post Offices were serving in the Kampong Ayer Area in Bandar Seri Begawan Temburong District, Tutong District and the Belait District while the Mobile Post Offices were attached to the G.P.O., and the Kuala Belait Post Office covering places adjacent to these 2 post offices. Letters posted in the Mobile and Riverine Post Offices received date-stamps of these offices with the exception of the ones operating in the Tutong and the Temburong Districts.

Routeing of Mail to Temburoug and Labi

The Bandar Post Office in the Temburong District was connected with the General Post Office Bandar Seri Begawan

mainly by the Marine Department outboard launches 3 times a week, i.e. on Mondays, Wednesdays and Saturdays and mails to and from Labi (also in the Temburong District) were transported by the same means twice a week on Wednesdays and Saturdays. Mail services between Labi (in Ulu Belait) and other post offices in the State were channelled through the Seria Post Office and a house-to-house delivery service was provided in this area on working days. Private Post boxes were not available in the Labi Post Office.

Mail Delivery Service & Pillar Boxes

In Bandar Seri Begawan, Seria and Kuala Belait, a house-to-house delivery service was provided except on Fridays, Sundays and public holidays, Pillar boxes for the receipt of letters were provided at important road junctions and public places in the various districts and these boxes were cleared once or twice daily except on Sundays.

Stamps Released

Five commemorate issues of postage stamps were released in 1972 and these stamps were placed on sale for a period exceeding 3 months respectively. These issues of stamps were :-

- (a) The opening of the Brunei Museum released on 29th February 1972.
- (b) The visit of Her Majesty Queen Elizabeth II to Brunei released on 29th February 1972.
- (c) The change of name to Bandar Seri Begawan sold on 4th Oct., 1972.

COMMUNICATIONS

- (d) The opening of the RAF Museum in England released on 15th November, 1972.
- (e) Royal Silver Wedding released on 20th Nov. 1972.

Numerous orders for these special issues of postage stamps from philatelists as well as stamps dealers were received and dealt with.

Retirements

Pengiran Bahar bin Pengiran Shahbandar, the Postmaster General Proceeded on leave on 1st October, 1972 prior to retirement and Tuan Haji Ali Khan bin Abdul Khan was restored to his old post as Postmaster General with effect from the same date.

Revenue

Money order issued during the year totalled 864,073.00 whilst those cashed amounted to \$87,891.00 compared with those issued in 1971 amounting to \$698,964.00 and those cashed totalling \$60,194.00. British Postal Orders sold during the year amounted to \$145,228.00 and those cashed totalled \$36,348.00 as compared to 1971 sold \$182,661.00 and cashed totalled \$43,778.00. Stamps sold totalled \$917,410.00 compared to \$916,351.00 collected in 1971.

COMMUNICATIONS

(b) TELECOMMUNICATIONS

TELEGRAPH:-

Teleprinter circuits were maintained internally and externally to Kota Kinabalu and the International Telegraph Centre in Kuala Lumpur.

The Singapore and Kuching circuits remain had keyed morse.

Service is available to most countries in the world.

Outgoing traffic figures are given below:-

NUMBER OF WORDS TRANSMITTED TO COUNTRIES OUTSIDE BORNEO

	PRIVATE	GOVERNMENT	PRESS	TOTAL
1969	835,826	128,449	144,436	1,108,711
1970	697,834	107,737	130,780	936,351
1971	888,053	119,591	92,177	1,099,821
1972	1,340,136	114,697	57,259	1,512,686

There has been an increase of 37.6% total outgoing traffic, the 1972 figure being the highest ever recorded.

Incoming traffic has also increased by 52.3%, the comparable figures for the past two years being as given below:-

	PRIVATE	GOVERNMENT	PRESS	TOTAL
1971	897,960	40,997	1,614	940,571
1972	1,293,544	38,516	-	1,332,060

COMMUNICATIONS

TELEX:-

There has been a further increase in telex service traffic which can in part be attributed to six additional subscribers; service has also been improved by the installation of a 24 channel V.F. link between Bandar Seri Begawan and Kuala Belait. Calls were made to 24 countries with a total chargeable time of 115,746 minutes which is approximately a 32.3% increase.

The majority of the outgoing traffic was distributed to:

	ENGLAND	SINGAPORE	MALAYSIA	JAPAN
1970	20,019	7,498	4,160	1,927
1971	37,754	15,547	17,371	10,892
1972	52,100	24,726	13,398	11,899

There was also an increase in the incoming traffic which was of the order of 65.7%, representing 53,862 minutes- the total chargeable time was 135,862 minutes.

The majority of the incoming traffic was from:-

	UNITED KINGDOM	SINGAPORE	MALAYSIA	JAPAN
1971	37,679	19,575	12,471	8,234
1972	59,901	28,509	21,840	14,310

PRIVATE TELEGRAPH CIRCUITS:-

An A.F.T.N. teleprinter circuit between Brunei Airport and Kota Kinabalu Flight Information Centre was maintained and operated for the Civil Aviation Department.

COMMUNICATIONS

A similar circuit for private operation was maintained between Bandar Seri Begawan and Seria.

TELEPHONES

Automatic telephone exchanges were maintained in Bandar Seri Begawan, Kuala Belait, Seria, Muara and Mile 6 Jalan Muara; small manual exchanges remain in service in Tutong and Bangar..

A trunk cable between Seria automatic exchange and Brunei L.N.G. Company's offices was completed early in the year; limited service has also been extended to Sungai Liang.

The laying and jointing of the Brunei - Muara trunk cable started last year is continuing but due to other construction works progress is slow.

An exchange area duct and manhole scheme for distribution cables was completed in Tutong and the construction of the telephone exchange building was started in the second half of the year.

The installation of a 200 line PABX for the RBMR was completed in March. A similar 100 line PABX was installed for the Brunei L.N.G. Company.

A 100 line extension to the Seria automatic exchange was completed in December.

A permanent R.A.X. type automatic exchange was installed in a newly constructed building 6 miles Jalan Muara and commissioned in July. A further extension of

COMMUNICATIONS

1700 lines to the Bandar Seri Begawan exchange was started in September and will be completed mid-year, 1973.

During the year, 18 small P.A.B.X's were installed in the Bandar Seri Begawan area and 10 in the Kuala Belait area. In the same period a total of 8 small PABXs were recovered.

A total of 1100 telephones were installed during the year as below:-

BANDAR SERI BEGAWAN	- 592
KUALA BELAIT	- 266
SERIA	- 225
TUTONG	- 20
BANGAR	- 5

In the same period 218 telephone were recovered, leaving a net gain of 882 stations for the year.

TELEPHONES IN USE ON 31ST DECEMBER

<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>
3705	4820	5473	6355

TRUNK CALL TRAFFIC

External: Bothway traffic in chargeable minutes between Brunei and :

	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>
Labuan	61,713	61,697	77,605	75,442	90,164
Kota Kinabalu	128,288	114,742	144,017	151,297	141,755
Sandakan	7,399	8,318	9,653	7,484	5,797

COMMUNICATIONS

Tawau	5,254	11,367	12,242	7,508	7,132
Singapore	39,213	54,818	60,380	77,034	60,051
K. Lumpur	16,768	19,584	20,295	19,442	20,237
Hong Kong	13,481	20,925	16,708	17,854	13,593
Japan	1,424	4,945	5,673	8,012	4,187
Taiwan	571	1,560	4,379	7,598	4,292
U.K.	570	1,468	1,922	3,974	3,638
Australia	501	514	379	948	588
Others	236	853	1,574	3,838	4,899

Total =	275,358	300,791	354,827	380,431	356,333
	=====	=====	=====	=====	=====

Traffic in chargeable minutes between Bandar Seri Begawan and :

		<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>
K. B. includ-	O/G	167,191	168,164	234,861	224,953	230,278
ing Seria	I /C	153,706	158,308	221,007	257,859	254,103
Miri	O/G	21,124	26,857	32,198	31,207	30,768
	I /C	31,275	25,602	29,283	29,789	29,024
Sibu	O/G	305	180	154	372	559
	I /C	615	193	36	187	208
Kuching	O/G	227	160	585	2,674	3,743
	I /C	483	145	1,271	4,633	4,301
Total =		374,609	379,609	519,395	551,674	552,984
		=====	=====	=====	=====	=====

COMMUNICATIONS

There has been an overall decrease of about 6.4% in external traffic mainly due to cancellation of calls to Singapore and Kota Kinabalu because of long delays.

The very small increase in internal and Sarawak traffic is attributable to the shortage of trunk circuits between Bandar Seri Begawan and Kuala Belait.

RADIO

Equipment to further strengthen and extend the trunk system was received and installation of the new radio bearers started late in the year. A major delay in starting the work earlier in the year as scheduled was the construction of a repeater station building on Bukit Ambok, Tutong. However, a good start has been made and it is anticipated that these essential additional circuits will be put into service during the first quarter of next year.

A 12 channel radio bearer system was installed between Bandar Seri Begawan and Muara Port to provide extra telephone circuits and broadcast facilities for the visit of Her Majesty The Queen on board the Royal Yacht Britannia. The system has remained in service to strengthen and increase the junctions to and from Muara exchange.

Preliminary planning work is progressing for a new high frequency transmitting site with a view to establishing direct telephone and telegraph circuits to Singapore and Hong Kong which should improve the flow of external traffic.

The "Ulu" H.F. scheme was maintained to provide essential service to 26 remote villages.

COMMUNICATIONS

GENERAL

For the first time the Department issued a telephone directory complete with a classified advertisement section which was published by a specialized company.

Only one senior staff post was filled during the year which is that of Chief Technical Assistant, the posting being to Kuala Belait.

The Department is still facing a serious shortage of skilled supervisory and technical staff. Of ten existing vacancies for Trainee Technicians, only one more post has been filled. The number of telephones in service is steadily increasing and there will be a further increase of trunk circuits shortly; the resulting maintenance loads make it more essential than ever before that suitable trainees be recruited otherwise a deterioration in service is inevitable.

(c) PRESS, BROADCASTING INFORMATION SERVICES & FILMS

The press

There are three weekly newspapers in the State, viz:- "The Borneo Bulletin", Brunei's oldest newspaper, reviews the news of the Borneo territories each week and has a circulation of 20,000 copies. It is published by the Brunei Press Ltd. in Kuala Belait and sells at 20 cents per copy. "Pelita Brunei" which is printed in Romanised Malay and Chinese, is published gratis by the Department of Broadcasting & Information and issued to Government employees and to the general public. It is printed by the Star Press in Bandar Seri Begawan and appears on Wednesdays. "Salam"

COMMUNICATIONS

which is published by the Brunei Shell Petroleum Co., Ltd. in three languages, Romanised Malay, Chinese and English is the company's own newspaper and appears on Saturdays.

The Brunei Press Ltd. is also the Government Printer and publishes the Official Gazette in Malay and English every two weeks. Included with the Gazette are any enactments or subsidiary Legislation which may be passed by the Sultan-in-council and/or the Legislative Council. The Official Gazette is available to the public by subscription. Rates may be obtained from the Government Printer, P.O. Box 69, Kuala Belait.

Broadcasting and Information Services

Broadcasting commenced in Brunei on 2nd May, 1957 and there was a separate Information office at that time. In 1962 both were amalgamated under a Director and have since functioned as one department, the official mouthpiece of the Government, to keep the public informed on vital issues and the news of the day. The department maintains reading rooms in five centres throughout the State which are used by thousands of people, young and old, of all racial groups who can read daily newspapers and magazines in their own languages. These reading rooms are situated in Bandar Seri Begawan, Tutong, Seria, Kuala Belait and Bangar in the Temburong District.

The department also maintains 16 mm. film units in Bandar Seri Begawan and Kuala Belait which are used to give film shows in the various Kampongs and long-house in the State as well as at schools and other institutions. In addition to screening films, the department has a small film production unit which produced news-reels and documentary

COMMUNICATIONS

films for local exhibition. During 1972 it produced 3 news-reels and several film records of important State functions and Royal ceremonies including the visit of H.M. Queen Elizabeth and the Duke of Edinburgh.

The department also supplies public address systems to schools and colleges in the State and for other public events when required. Field officers of the department tour the various country districts and give talks and set up audiovisual displays on matters of public interest.

At the department's headquarters in Bandar Seri Begawan there is an airconditioned auditorium capable of seating nearly 600 persons where film and stage shows are held from time to time. There are now several local amateur dramatic groups who produce plays and other entertainments as well as concerts in this modern theatre.

Cinemas

There are eight commercially operated cinemas throughout the State located as follows: Bandar Seri Begawan (3), Tutong (1), Seria (2), Panaga (1) and Kuala Belait (1). Films are screened in Malay, Chinese, Hindi, English and Japanese with captions in another language or that of the sound-track. This is the main form of public entertainment in Brunei. Many clubs also have regular film shows using 16 mm., rented from a commercial agency in Singapore.

Radio Brunei

Programmes are broadcast by Radio Brunei on four channels in the medium wave band and on two channels in the short wave band (61 and 41 metres) in Malay, Chinese

COMMUNICATIONS

and English for a total of 182 hours per week. The present transmission schedule for the medium wave services consists of two groups with a short-wave transmitter tied to each group. Thus the Malay programme service is broadcast on 242m, 273m, and on 61.6m; the English service is heard on 399m, 335m and 41.6m. The English and Chinese services also share transmissions on 242m, 273m and 61.6m at different times with the Malay service. The English service and the Gurkha programme share 305m, 335m and 41.6m during the evening hours.

The popularity of Radio Brunei programmes is not restricted to the local audiences; listeners from outside the State reported their enjoyment of these programmes in all three languages. There is one hour programme every evening in Gurkhali for the benefit of the Gurkha battalion stationed at Seria. This programme was supplied by the British Forces Broadcasting Service in Singapore.

Listener Research

The analysis of listener mail which commenced in 1965 continues to provide much useful information about Radio Brunei's audiences in and out of the State. The monthly average of letters received by the three language services was as follows:-

Malay	Chinese	English	Total
1,486	1,187	3,623	6,316

It is difficult to assess the number of listeners in the State of Brunei because there is no radio licence in force. Estimates can only be made on the basis of the importation and sale of radios and by observation.

COMMUNICATIONS

The advent of the transistorised radio receiver with its low cost and cheap power supply has increased the number of listeners everywhere and Brunei is no exception. Using the import figures of radios as a basis, it is estimated that there are at least 15,000 receivers in the State. In order to help the inhabitants of the remote villages, the Government has subsidised the sale of transistor radios which are sold to approved applicants on a straight instalment-payment over 12 months. These sets become the property of the applicants on the first payment of the monthly instalment and the returns show a very small rate of default in payment. Many hundreds of sets have thus been put into use by the poorer sections of the population, particularly in the isolated communities of the "ulu" (forest) where dissemination of news and entertainment has been lacking.

Establishment

The department is headed by a Director and a Deputy Director. While the technical responsibility of the department is borne by the Chief Engineer assisted by a competent local and expatriate staff. The present strength of the department is 165 persons, with 12 part-time staff and 18 daily paid workers. The operations of Radio Brunei are dispersed among the headquarters building in Bandar Seri Begawan, and the transmitting stations of Berakas and Tutong. There is a satellite transmitter at Kuala Belait to serve that part of the State.

Training

Facilities are being made available at the new Electrical Trade School in Kuala Belait for technical staff of government departments to receive advanced training in electronics and allied subjects. Several of these departments' Technical Assistants were taking such courses in 1972.

COMMUNICATIONS

Annual Budget

The 1972 budget of the Department was \$2,384,978. of which Personal Emoluments amounted to \$1,366,005. Annual Recurrent charges to \$658,680. and special expenditure to \$360,293. The amount provided for the department in the Development Estimates for 1972 was \$300,000.

(d) LAND TRANSPORT

GENERAL

There has been an increase in the number of motor vehicles on the road inspite of no new development projects coming in the year. With the completion of a highway road at Temburong, the number of vehicles in that district has risen to over a hundred.

REGISTRATION AND LICENSING OF MOTOR VEHICLES

The total number of all types of vehicles licensed on the road was 20,117 as compared to 17,186 in 1971. It shows the number of passenger cars has increased considerably but motor cycles and scooters have very much decreased. The fact is that the motoring public prefer to own passenger cars rather than motor cycles or scooters which do not afford them the carriage conveyance. The following is a summary of the statistics:-

COMMUNICATIONS

**No. of motor Vehicles in use or licensed as at 31st Dec. of
Each year**

	<u>1971</u>	<u>1972</u>	<u>Increase</u>
Passenger Cars	12,055	15,118	3,063
Motor Cycles & Scooters	1,308	878	-430
Commercial Vehicles	2,513	2,909	396
Taxis	107	104	-3
Buses	139	132	-7
Government Vehicles excluding Military	1,064	976	-88
	<u>17,186</u>	<u>20,117</u>	<u>2,931</u>

**No. of motor Vehicles registered in each month in 1971 and
1972**

<u>Year</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>July</u>	<u>Aug</u>	<u>Sept</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Total</u>
1971	193	112	235	195	181	179	202	191	191	200	185	209	2,278
1972	213	167	163	199	169	125	197	206	207	271	214	199	2,330

COMMUNICATIONS

DRIVING LICENCES

There were 20,543 annual driving licences and 9,255 provisional licences issued in 1972. Out of the above, 3,146 learner drivers took up driving tests but only 1,467 were successful and 1,679 were failures.

REVENUE

The total amount of revenue collected in the year was \$873,352 as compared to \$837,552 in 1971, an increase of \$35,800. No fee was payable on licences issued to Government officers under the Exemption Order.

INSPECTION OF MOTOR VEHICLES

Vehicle Inspectors were called by the Police to inspect 691 cases of accident vehicles out of 859 cases involved during the year. They attended 120 traffic cases in court as witnesses to these accidents.

PUBLIC SERVICE VEHICLES

The number of taxis and buses was limited as at the moment there are already enough such vehicles to operate along all the main routes to cater for passengers. Wherever there is a rising need, consideration to increase these public service carriers will be made by the Motor Transport Licensing Authority.

COMMERCIAL VEHICLES

All commercial vehicles for hire and reward have been placed under the control of the Motor Transport Licensing Authority since the beginning of the year. As such, permits

COMMUNICATIONS

are required to license and operate these vehicles for hire or reward for the carriage of goods. The control has become necessary with a view to assist the local residents for employments and participation in the transport industries.

(e) **Civil Aviation.**

The State is not represented independently on the International Civil Aviation Organisation and it was agreed as part of a new treaty between Brunei and the United Kingdom that the United Kingdom would look after Brunei International Aviation affairs.

The impending commissioning of the new airport emphasised the importance of the Department and it was raised to a Director post. Pending the recruitment of a permanent Director of Civil Aviation the appointment was filled by officers on loan from the United Kingdom Civil Aviation Authority.

The disbandment of Malaysia Singapore Airlines on 1st October 1972 into two separate national airlines, Singapore Airlines and Malaysian Airlines System had unfortunate repercussions for the State as the Air Services Agreement with Malaysia had not been signed. Operations to Brunei by the new airline therefore had no legal basis and services to Malaysia ceased. An agreement had been signed with Singapore and operations by Singapore Airlines commenced on 1 October 1972 using F27 aircraft. It soon became apparent that the traffic to Singapore warranted the use of larger aircraft and 7,200 feet of runway at the new International Airport was commissioned on 1st November to permit the operation of SIA's 737. This twin jet aircraft brought Singapore within 2 hours flight of Brunei. A chartered Boeing 707, the first four engined jet aircraft to use the International Airport, arrived in December.

COMMUNICATIONS

A temporary terminal building, complete with air conditioning and flush toilets, was designed and erected in the last 14 days of October to allow passengers to be handled at the new airport.

A full runway length is now estimated to be completed early next year and the Terminal Building by the middle of the year.

In spite of the cancellation of scheduled services to adjacent towns in Malaysia from 1st October until the end of the year, the number of passengers showed a healthy increase, rising by 9.6%. Freight traffic expended even more rapidly rising to 21% inbound and over 100% outbound.

Further expansion in the future is assured and Brunei can look forward to taking its proper place in the international aviation field.

Statistics

	1970	1971	1972
Air Craft Movements			
Civil	8,072	8,716	9,705
Military	1,685	2,489	1,676
Passengers			
Embarked	43,091	45,269	50,936
Disembarked	42,573	47,039	50,081
Freight			
Mail (kilos)	75,443	46,384	99,451
Cargo (kilos)	771,079	931,243	1253,541

The Climatological Summary is attached.

COMMUNICATIONS

STATION : BRUNEI AIRPORT
 HEIGHT OR STATION
 ABOVE MEAN SEA LEVEL : 14½ FEET

BRUNEI
 CLIMATOLOGICAL SUMMARY YEAR 1972

LATITUDE : 4° 45' NORTH
 LONGITUDE : 114° 00' EAST

	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL	MEANS OR EXTREME
Rainfall														
Total (inches)	18.84	7.90	4.03	7.10	3.61	4.82	1.40	4.27	7.88	10.86	15.33	7.99	96.63	8.15
Duration (hours)	89.50	34.50	32.25	24.05	26.10	40.05	10.40	36.40	46.30	48.20	57.40	27.45	465.00	38.45
Number of Wet Days	23	14	14	21	13	14	10	13	18	16	24	14	194	16
Most in a day	3.66	2.05	1.65	2.57	1.78	0.74	1.25	1.28	1.92	2.49	1.92	3.75	25.57	2.13
Date	1st	2nd	1st	27th	19th	17th	19th	29th	25th	1st	13 & 24	2nd	-	-
Bright Sunshine														
Total Duration (hours)	159.90	178.10	177.45	245.35	245.10	218.85	258.55	220.05	187.80	244.00	230.35	271.20	2636.90	219.74
Mean Duration (hours)	5.16	6.11	5.72	8.17	7.91	7.29	8.34	7.10	6.26	7.87	7.68	8.75	86.86	7.20
Longest in a Day	10.25	10.85	10.40	11.20	11.75	11.60	11.60	10.85	10.75	10.55	10.96	10.95	131.40	10.95
Date	27th	29th	22nd	5th	13rd	7th	25 & 26	24th	19th	23rd	5th	31st	-	-
Shortest in a Day	0.00	0.95	0.00	0.00	0.70	0.60	2.35	0.00	0.05	1.00	1.00	1.15	7.80	0.65
Date	1 & 11	23rd	1st	8th	7th	7th	20th	16th	8th	14th	30th	4th	-	-

COMMUNICATIONS

STATION : BRUNEI AIRPORT
HEIGHT OR STATION
 ABOVE MEAN SEA LEVEL : 14½ FEET

BRUNEI
CLIMATOLOGICAL SUMMARY YEAR 1972

LATITUDE : 04° 55' NORTH
LONGITUDE : 114° 56' EAST

	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL	MEANS OR EXTREME
Mean 0800 hour Air Pressure at Mean Sea Level (Millibars)	1010.9	1009.5	1011.1	1010.1	1010.3	1009.1	1009.3	1010.4	1011.3	1011.3	1010.2	1011.1	12123.6	1010.3
Air Temperature in Degrees Fahrenheit														
Means of:														
A - Maximum	84.7	86.9	86.7	89.7	90.2	89.7	93.0	91.7	89.6	89.9	89.2	89.8	1071.1	89.3
B - Minimum	72.0	73.4	72.9	73.9	74.3	74.1	74.7	73.9	74.7	74.0	74.2	73.7	885.5	73.8
Means of "A" and "B"	78.3	80.1	79.8	81.8	82.2	81.9	83.8	82.8	82.1	80.9	81.7	81.7	977.1	81.4
Means of diurnal variation "A" and "B"	12.6	13.5	13.7	15.8	15.9	15.6	18.3	17.8	15.0	15.9	15.0	61.1	185.2	15.4
Absolute Extremes:														
Highest Maximum	90.1	89.8	91.9	92.8	92.7	93.2	96.2	95.4	93.8	92.9	91.5	91.9	1112.2	92.7
Date	31st	6th	22nd	4th	15th	29&30	13th	8th	5th	18th	several	20th	-	-
Lowest Minimum	66.0	69.5	70.9	71.1	72.1	70.8	71.6	70.0	71.2	72.2	71.8	71.2	848.4	70.7
Date	12th	28th	2nd	1st	10th	22nd	21st	29th	2nd	3rd	14th	16th	-	-
Lowest Maximum	74.9	83.0	76.3	83.0	81.0	81.0	87.8	86.8	82.6	85.0	85.8	86.1	993.3	82.8
Date	1st	10th	1st	8th	7th	7th	5th	21st	8th	14th	22nd	4th	-	-
Highest Minimum	75.0	76.7	75.2	76.0	77.0	76.2	77.5	77.5	79.3	76.0	76.1	76.8	918.3	76.5
Date	22nd	13th	20th	16&28	29th	27th	15&17	1st	17th	24th	14th	31st	-	-

COMMUNICATIONS

BRUNEI CLIMATOLOGICAL SUMMARY YEAR 1973																LATITUDE : 04° 55' NORTH LONGITUDE : 114° 56' EAST	
STATION : BRUNEI AIRPORT HEIGHT OR STATION ABOVE MEAN SEA LEVEL : 14½ FEET																	
	JANUARY	FEBRUAR	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL	MEANS OR EXTREME			
Mean 0800 hour New Point Temperature (Deg. Fahrenheit)	73	74	74	75	76	76	76	75	75	76	76	75	898	75			
Mean 0800 hour Vapour Pressure (millibars)	26.6	28.8	28.6	29.5	30.2	30.2	30.3	29.5	29.9	30.2	30.2	30.4	355.4	29.6			
Mean 0800 hour Relative Humidity (Percentage)	96	96	96	92	92	93	93	93	92	93	93	96	1123	94			
Surface Wind Speed																	
Miles Per hour	35	26	25	29	24	32	32	45	27	30	31	26	362	30			
Highest Wind Gust	060	060	020	230	190	220	210	290	240	130	040	020	-	-			
Direction Degrees True	060	060	020	230	190	220	210	290	240	130	040	020	-	-			
Date	23rd	19th	3rd	1st	28th	7th	20th	2nd	10th	25th	9th	25th	-	-			
Time	2015	2140	1400	1440	1340	1140	1155	1200	1520	1725	1750	1506	-	-			
Daily Mean Wind Speed	2.3	2.3	3.0	2.3	1.3	1.3	1.3	1.4	1.4	1.3	1.2	1.7	20.9	1.7			
Number of hours Wind Speed 0 to 3 m.p.h.	464	447	404	494	613	599	571	613	594	618	600	566	6583	348.6			
Number of hours Wind Speed 4 to 12 m.p.h.	169	158	208	165	313	119	172	130	125	126	126	177	1800	150.0			
Number of hours Wind Speed 13 to 24 m.p.h.	7	-	5	-	-	2	1	1	1	-	-	1	18	1.5			

COMMUNICATIONS

STATION : BRUNEI AIRPORT
 HEIGHT OR STATION
 ABOVE MEAN SEA LEVEL : 14½ FEET

BRUNEI
 CLIMATOLOGICAL SUMMARY YEAR 1972

LATITUDE : 04° 55' NORTH
 LONGITUDE : 114° 56' EAST

	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL	MEANS OR EXTREME
Wind Direction (Degrees True)														
Number of hours North (340-020)	72	112	125	58	39	13	5	27	34	36	47	132	700	58.3
Number of hours North East (030-060)	11	30	22	13	10	16	1	10	15	11	13	62	214	17.8
Number of hours East (070-110)	2	1	4	1	4	7	3	12	8	8	4	5	59	2.9
Number of hours South East (120-150)	2	-	-	4	2	2	-	10	5	8	1	-	34	2.8
Number of hours South (160-200)	56	14	29	40	60	50	82	64	43	31	29	10	508	22.3
Number of hours South West (210-240)	16	7	24	25	33	60	94	43	54	29	51	17	453	37.8
Number of hours West (250-290)	25	13	16	24	28	36	62	40	35	33	26	16	354	29.5
Number of hours North West (300-330)	71	73	81	105	76	70	30	63	71	89	78	34	841	70.1
Number of hours Calm Wind	385	355	316	389	492	466	467	475	455	499	471	468	5238	436.5
Defective Record	104	91	127	61	-	-	-	-	-	-	-	-	383	31.9

CHAPTER 11

(a) PUBLIC WORKS AND UTILITIES

Public Works - General

The increase in annual expenditure from \$39,000,000 in 1971 to \$42,000,000 in 1972 can be misleading in assessing the output of the Department, as a substantial element of this latter figure represents the major projects in hands of Consulting Engineers, and in which the Department's contribution was mainly of an administrative nature. In round figures, a work programme of \$35,000,000 annually continues to be the utmost that can be expected from the Department's efforts, with staff and equipment as they are at present.

2. In future years, a sharp increase in Annually Recurrent Expenditure can be anticipated as the numerous technical services recently completed, or still in progress, including buildings, water supplies, roads and sewerage, become maintenance liabilities.

Staff

At the commencement of the year, there were 1114 monthly staff comprising of Permanent, Contract, Month to Month and Open Vote officers besides, there were 1,319 daily paid workers in the department.

During the year under review, 13 new monthly paid officers were recruited, 37 officers have left the service due to resignation death, non-renewal of contract and transfer to other department. Besides, there were 92 daily paid workers promoted to monthly pay. Therefore, the

PUBLIC WORKS AND UTILITIES

total of monthly paid workers added to the strength of the monthly paid of the department during the year is 105. Hence, the total monthly staff at the close of the year remained at 1,184 while the figures for 1971 were 1,114.. This increase in number is mainly due to the number of promotion of daily paid workers monthly to paid of last year's and of whom only 3 of them have been promoted to monthly paid in 1971 and also due to the new recruitment as well as the transfer of officers from other department . During the year, there were 2 local graduate Engineers and 1 local graduate Architect who have joined the department. Two Brunei Mechanical Engineering graduate and one Architectural graduate of the year have joined the department towards the end of the year.

At the end of the year, there were 1,319 daily paid workers and out of these figures are 657 skilled labourers, 542 semi-skilled labourers and 120 unskilled labourers compared to 1971 figures of 1,370, i.e., 877 for skilled labourers, 440 semi-skilled labourers and 53 unskilled labourers. The drop of skilled labourers is almost due to the promotion to monthly paid, retirement and deaths. The rise of semi-skilled labourers is mainly due to the promotion after several years experience and supervision. Lastly,

the rise of unskilled labourers is mainly due to recruitment of labourers for the maintenance of new roads in Temburong, and for the clearing of road reserve throughout the state as well as other road projects. During the year, 116 new engagements were made and 51 workers left the service due to retirement, resignation, deaths and being transferred to other departments. Most of the labourers engaged last year were mainly for road maintenance. The drop of 1972's figures for daily paid workers is mostly due to their promotion to monthly paid.

PUBLIC WORKS AND UTILITIES

During the year, the vacant posts include 5 Engineers, 3 Architects, and 1 Chief Technical Assistant. Half the vacancies are still likely to be filled by newly graduated Bruneians in the near future.

No difficulty was experienced in meeting the requirements for manual and industrial employees as far as numbers were concerned. A number of the more highly skilled tradesman posts can now be filled and replaced by locally born artisans.

The Implementation of Government policy in introducing an age limit of 65 for daily rated staff resulted in the retirement of 37 men during the year. The labour force at the conclusion of the year consisted of 1,319 daily rated and 867 monthly rated men compared to 1,370 and 804 men respectively at the end of the year.

The total personnel strength of the Department as on 31st December, 1972 was :-

(a)	Engineering and Professional	22
(b)	Administrative and Clerical	99
(c)	Technical	58
(d)	Supervisory (Overseers, Mandores etc.) ...	138
(e)	Manual	2,286
		<hr/>
		TOTAL 2,603
		<hr/>

This compares with 2,474 in 1971 and 2,575 in 1970.

CONTRACTORS

The position regarding both the capacity of contractors and their system of operation remained largely unchanged, the number who contributed effectively towards the works programme of the Department representing only a small proportion of those registered. It was necessity for a contractor to have a firm grounding in his particular trade, adequate workshops and other premises, and a sufficiency of plant and labour.

2. The better organised local contractors however played a substantial part in the large development projects assigned to firms of Architects and Engineers, indicating that as far building work as concerned only the most extensive and complex schemes would be beyond their capacity, provided that they confine their activities to a single project.

3. A number of overseas contracting firms to whom contracts were awarded had under-estimated the problems of logistics and expense arising locally, associated principally with the supply of material and labour. The smaller firms to whom such work is normally awarded are frankly unsuitably equipped in either labour, plant, or knowledge, and progress is frequently disappointing.

4. Many of the smaller firms have not mastered the problems of pricing their tenders; and extraordinarily large variations between individual items and tenders frequently appeared, while arithmetical errors which should be obvious to an experienced eye, are a very common occurrence. Undue optimism over completion periods frequently arose.

PUBLIC WORKS AND UTILITIES

5. During the year, 120 contracts for both Brunei and Kuala Belait were let. The largest single contract that were let consumed a sum of \$896,500 which is for the construction of MRU Police complex Phase I - Phanage, Seria. The number of registered contractors as shown in our Record Book at the end of 1972 was as follows :-

- | | | | |
|----|------------------------|---|-----------------------|
| 1) | Class 'A' Contractors | - | 122 Nos (124 in 1971) |
| 2) | Class 'AX' Contractors | - | 26 Nos (25 in 1971) |
| 3) | Class 'B' Contractors | - | 86 Nos (84 in 1971) |
| 4) | Class 'C' Contractors | - | 165 Nos (158 in 1971) |
| 5) | Small Contractors | - | 261 Nos (260 in 1971) |

Materials

Brunei continues to be almost wholly dependent upon imported manufactured materials for the class of work of interest to this Department. The position regarding supply from the Country's own resources remains unchanged from earlier years, although the prospect of supplies of good quality sandstone cobbles from the Temburong area for use in Government projects generally becomes firmer as the construction of pavements in the Temburong Road Project and the International Airport for which this material is at present reserved, advances towards completion.

2. Otherwise, apart from bakau plies, bricks, beach sand, sandstone cobbles of a lower quality than those from Temburong, soft woods, and secondary hard-woods, development was wholly dependent upon imported materials and manufactured articles. In this respect, some 30,000 tons of crushed granite were imported from Singapore for high quality road surfacing work, while a much smaller quantity of carefully selected granite from Hong Kong was used in high grade concrete work in water retaining structures constructed by Consulting Engineers.

PUBLIC WORKS AND UTILITIES

Buildings

The Department is responsible for the maintenance of all Government buildings, apart from a few purely institutional premises of simple type, and with a few exceptions for all new building projects up to an individual value of about \$500,000. Above that figure, schemes are generally assigned to firms of Architects by the Commissioner of Development. Expenditure on maintenance of buildings was \$2.5 million and on new building projects \$6.3 million.

2. Buildings (Brunei/Muara/Tutong/Temburong)

Works in progress and completed during the year (including those under Architect) are :-

Education

(a) SOASC, 5 toilet blocks	\$ 63,000 - Completed
(b) S.M. Baklau, Drains and piling work	\$ 12,000 - completed
(c) S.M. Lumapas, Completion of School block, Dewan & Quarters	\$103,000 - completed
(d) S.M. Limau Manis and S.M. Masin, Fencing	\$ 10,000 - completed
(e) S.M. Amo, Construction of playing field	\$ 29,000 - in progress
(f) S.M. Panchor Murai, Construction of School & Quarters	\$191,000 - Work starting
(g) S.M. Tanah Jambu J. Muara Construction of School and Quarters	\$131,000 - Work starting

PUBLIC WORKS AND UTILITIES

- (h) S.M. Bokok, Temburong
Construction of School and
Quarters \$120,000 - Work starting

2. Police

- (a) Police Station & Quarters,
Tutong \$347,000 - completed
(b) Police Station & Quarters,
Muara \$476,000 - completed
(c) E quarters for Police
Complex, Tutong \$ 49,000 - in progress
(d) Police Headquarters Gadong,
Tennis & Badminton Court \$ 27,000 - in progress
(e) Police Station & Quarters,
Bangar \$691,000 - Work starting
(f) Police Headquarters Gadong,
construction of Quarters \$309,000 - completed

3. Housing, Works for Other Departments and Minor Works :

- (a) Municipal Department,
Tutong Housing \$268,000 - completed
(b) New Barrack block for Istana
staff \$373,000 - completed
(c) 8 units barracks for Sewerage
Section Staff at Jln. Kota
Batu \$108,000 - in progress
(d) Government Quarters at
Bangar \$460,000 - in progress
(e) 3 units barracks for Museum
Staff at Kota Batu \$ 44,000 - in progress
(f) 2 blocks F quarters at
Pengkalan Batu and 1 block
of F quarters at Masin for
Religious Department. \$149,000 - in progress

PUBLIC WORKS AND UTILITIES

(g)	1 block F quarters at Sg. Besar for Religious Department	\$ 45,000 - in progress
(h)	1 block F quarters at Kati Mahar for Religious Department	\$ 54,000 - in progress
(i)	1 block Class F quarters at Kasat for Religious Department	\$ 50,000 - in progress
(j)	2 blocks F quarters at Sinaut for Religious Department	\$140,000 - in progress
(k)	Addition & Alteration to Office of the Private Secretary of His Highness the Sultan at Istana Darul Hana	\$ 57,000 - completed
(l)	Squash & Tennis Courts at Darul Hana	\$ 52,000 - completed
(m)	New Horse Stable for Istana Darul Hana	\$ 28,000 - in progress
(n)	Municipal Department, drain at Kg. Pasang	\$ 22,000 - completed
(o)	Telephone exchange building Jalan Muara	\$ 27,000 - completed
(p)	1 block G quarters for Agricultural Department at Puni, Temburong	\$ 43,000 - completed
(q)	River wall at Sg. Kianggeh Marine Store	\$ 16,000 - completed
(r)	Drains and Kerbs for car parks at Civic Centre	\$ 17,000 - completed
(s)	Immigration Post at Puni, Temburong	\$ 34,000 - completed

PUBLIC WORKS AND UTILITIES

- (t) Reinforced Concrete Drains
for Tutong Town area \$ 29,000 - completed
- (u) R.C. drains for Municipal
Department at Sg. Sumbiling \$ 33,000 - completed
- (v) Renovation and alterations at
Bolkiah Camp, Berakas \$223,000 - completed

Housing, Work for Other Departments and Minor Works

- (w) Store for Agriculture Dept.
at Puni, Temburong \$ 17,000 - completed
- (x) Alteration, Additions &
Renovations for Army
Training Camp at Tutong \$198,000 - completed
- (y) Building for V.H.F. Repeater
Station at Bukit Ambok,
Tutong \$ 14,000 - completed
- (z) Alterations and Additions
to Ward 7 of General
Hospital, BSB \$ 11,000 - completed
- (a') Extensions to Operations
Theatre at General
Hospital, BSB \$ 98,000 - completed
- (b') Clothes drying areas for flats
at Jalan Malabau Baru \$ 13,000 - completed
- (c') Renovations & Reroofing to
the Mentri Besar's
Residence \$ 56,000 - completed
- (d') Telephone Exchange & Office
Building at Tutong \$273,000 - in progress
- (e') Medical Clinic at Amo,
Temburong \$ 44,000 - in progress
- (f') Medical Clinic at Gadong \$ 59,000 - in progress
- (g') Fencing to VIP Residences \$ 45,000 - in progress

PUBLIC WORKS AND UTILITIES

- (h') Timber Jetty & Boatshed for
Istana Darul Hana \$ 34,000 - in progress
- (i') Alteration and Additions at
Jerudong Prison Barracks \$ 48,000 - in progress
- (j') Farmers Training Centre
for agricultural centre at
Kilanas \$ 40,000 - in progress
- (k') Garages for Duli Pg.
Bendahara's Residence Jalan
Berakas \$ 16,000 - in progress
- (l') Fencing for Masjid Utama
Md. Salleh at Bangar \$ 17,000 - in progress

(B) : Buildings (Kuala Belait) :

- (1) **Police:**
- 1) Reno ation to Police Station and Con-
struction of Open Hall Police Com-
pound - Seria
\$138,546.40 - completed
 - 2) Construction of an Open Hall and other
works, Kuala Belait -
\$56,978.00 - completed
 - 3) Construction of MRU Police Complex1
Panaga Seria -
\$896,500.00 - in progress
 - 4) Construction of One Block Singlemen's
Barrack at Panaga Police Station
Compound -
\$110,272.00 - completed
 - 5) Repairs and Repainting to Buildings at
Police Station Compound Labi -
\$ 11,850.00 - completed

PUBLIC WORKS AND UTILITIES

- 6) Alteration and Addition to Existing 3 Nos. Barracks Panaga -
\$304,141.00 - in progress
- 7) Construction of concrete drains in the Police Compound - Labi -
\$ 7,584.00 - in progress

- (ii) **Army:**
- 1) Constuction of 10 Blocks 2 Units Class 'G' quarters for the Army -
\$881,277.50 - completed
 - 2) Supply and installation of High Level water tanks for the Army -
\$ 23,136.00 - completed
 - 3) Construction of an Army School at Mile 5 - \$218,307.60 - in progress
 - 4) Reinforced concrete Hardstanding for the Army - Seria
\$102,360.00 - in progress
 - 5) Sand-filling to 20 Units Class 'G' quarters -
\$ 49,234.00 - completed

(iii) **Education :**

- 1) Construction of One Block 6 Classrooms for Anthony Abell College Seria -
\$ 22,200.00 - completed
- 2) Sand-filling for Proposed Malay School Panaga -
\$ 98,736.00 - completed

PUBLIC WORKS AND UTILITIES

(iv) Miscellaneous Works (Completed) :

- 1) Road widening work from Mile 1 to entrance of access road to B.S.P. ferry -
\$ 27,000.00
- 2) Road Edging and ancillary works to New Kuala Belait Link Road -
\$ 54,418.00
- 3) Repainting and repairs to Buildings at the Forest Dept. Compound Audulau -
\$ 7,800.00
- 4) Constuction of 3 Blocks 2 units Bar-racks for forest Dept. at Andulau -
\$ 43,999.00
- 5) Construction of One Block 1 unit Bar-rack quarters for Medical Department, Sungai Liang -
\$ 13,199.00
- 6) Construction of R.C. Drain at Lorong Satu Barat, Seria
\$ 18,960.00
- 7) Construction of concrete drain along Jalan Setia Di-Raja Kuala Belait -
\$ 39,639.60
- 8) Fencing Religious Department Office, Kuala Belait -
\$ 7,053.00
- 9) Repainting and repairs to Buildings at Rural areas Belait District -
\$ 35,870.00

PUBLIC WORKS AND UTILITIES

- 10) Renovation to Electrical Department Office, Kuala Belait -
\$ 8,500.00
- 11) Erection of Chain Link Fencing to Government quarters Kuala Belait/ Seria -
\$ 31,832.00
- 12) Repairs to Mosque, Seria -
\$ 4,100.00
- 13) Repairs to Mosque, Kuala Belait -
\$ 6,600.00

(v) Miscellaneous Works In Progress

- 1) Grass Cutting along Kuala Belait/ Anduki Road
\$ 22,200.00
- 2) Repairs and repainting to Buildings in the Old Persons' Home, Seria -
\$ 9,350.00
- 3) Reconstruction of R.C. Drains along Jalan Mckerron, Kuala Belait -
\$ 12,221.00

Land Reclamation Kuala Belait

Sand was extracted from Mile 1 to Mile 4 beach, Sg. Anduan and Sg. Tali. A total of 24,000 yds. was taken by P.W.D. for filling new and existing building sites.

The following table gives the total quantity and cost of sand filling for the year :-

PUBLIC WORKS AND UTILITIES

	Location	Quantity (yd³)	Cost
By Swamp Filling gang	State Land	24,000	\$45,853.00
Contract No. KB.13/71	M5 Army Camp	14,000	\$49,234.00

Water Supply

General:

Rainfall during the year was 101.34 inches with the wettest month in January, (20.47 inches) and the driest month in July (1.08 inches) Tasek Reservoir reached T.W. L. on 1st. January, and remained virtually full until the 6th March. The lowest level was recorded on 29th October , with 28 feet having a storage capacity of 63.5 M.G.

Bandar Seri Begawan Supply

Rationing was enforced throughout the year varying from maximum of 7 hours to minimum of 3 hours. The total output from Tasek was 933. m.g. giving an average consumption of 2.55 m.g.d. which compared more favourable than the previous year figure 2.0 m.g.d. The increased output is due to the commissioning of Klanggeh Pumping Scheme.

The number of water bowzers had been increased from three to eight to cope with drought season in August to November.

The number of consumer connections dropped further from 450 last year to 313 this year probably due to the slow tempo of development.

PUBLIC WORKS AND UTILITIES

Kuala Belait/Seria Supply

The number of consumers continued to increase during the year. With supply remaining almost constant, it was necessary to reduce the hours of supply from 8 hours to 5½ hours daily.

	<u>1972</u>	<u>1971</u>
(a) Total consumption in gallons	335,905,000	356,000.000
(b) Average daily consumption in gallon	917,000	975,000
(c) New service connections	71	104
(d) Total number of existing services	2,795	2,673

New Mains Laid in Kuala Belait/Seria:

	<u>1972</u>	<u>1971</u>
(a) $\frac{3}{4}$ " G.I. pipes	40 feet	160 feet
(b) 1" G.I. pipes	100 "	700 "
(c) $1\frac{1}{2}$ " G.I. pipes	440 "	-
(d) 2" G.I. pipes	680 "	1,420 feet
(e) 3" G.I. pipes	1,514 "	-
(f) 4" A.C. pipes	3,108 "	472 "

Temporary Bangar Water Supply

This set up was bought over from the Road Construction Contractor and since then was able to cope with the Town supply and occasionally supplemented by bowsters during drought when seawater intruded beyond the Bangar bridge.

PUBLIC WORKS AND UTILITIES

Rural Supplies

Sungai Basong supply in Tutong had managed to satisfy the demand of consumers. Bowser supply was provided during the drought season.

Lumapas water supply was maintained on a satisfactory level.

The number of consumer connections was 62.

Bukit Serusop Tank

The tank was put into service and served as a service tank for the Jalan Berakas area.

Sungai Tutong Scheme

Fresh tender was called from the Phase 1 due to the fact that the contractor was unable to fulfill the contract obligations.

Phase II work was in progress and the Reticulation Scheme was near completion.

Gas Supplies Kuala Belait/Seria

This commodity, which like water, is obtained in bulk from Shell Company and distributed through public mains shewed few developments during the year. Unlike water there is no shortage.

	<u>1972</u>	<u>1971</u>
(a) Total consumption in cu. ft.	563,582,000	573,019,000

PUBLIC WORKS AND UTILITIES

(b) Average daily consumption in cu. ft.	1,539,000	1,570,000
(c) New service connections	37	71
(d) Total number of existing services	2,577	2,531

Road projects

As on 31st. December, 1972 the following lengths of roads were listed under PWD maintenance for B.S.B. district.

Bituminous-surfaced roads	-	178.087 miles
Water-bound gravel roads	-	15.204 "
Earth roads	-	8.223 "
Concrete roads	-	4.197 "
TOTAL		<u>205.711 "</u>

2. The above figures show an increase of 40,231 miles from last year's report. This addition constitutes mainly of the roads completed by the Consulting Engineers in Temburong and some PWD constructed roads in Bukit Sulang and the proposed industrial area in Muara.

3. Road projects undertaken departmentally in Bandar Seri Begawan district :-

(a) **Jalan Kota Batu** - \$4,800,000 - 11½ miles

Hot-mixing of the final section which was carried forward from the previous year was finished in January.

The entire project completed during the year.

PUBLIC WORKS AND UTILITIES

(b) **Jalan Lamunin, - \$3,000,000 - 10 miles**

The last 2 miles of this project was hot-mixed. Work on side-tables, turfing, etc., was in progress at the end of the year before turning over this section for maintenance.

(c) **Jalan Layong - \$1,700,000 - 4½ miles**

Road formation completed and the 3 miles from Lamunin to headworks site was laid with stone base. This road, incidentally, was extended to include another ½ mile up to the east bank of Sungai Tutong near Kampong Sungai Damit Pemadang. By the end of the year, the supply of additional crushed stones by contract was on tender and commencement of deliveries of expected in the first months of 1973.

(d) **Jalan Bukit Sulang - \$1,120,000 - 2¾ miles**

Work on this project started in April and involves a large amount of earthworks and haulage at long distances. Progress was delayed by wet weather and numerous plant breakdowns that resulted in the absence of essential plant at the site for some period at a time. As the year ended, clearing of 2½ miles was completed and earthworks was at 1½ mile. Tenders for the supply of stones for base were invited.

(e) **Jalan Subok - \$875,000 - 2 miles**

Except for the approaches to the bridges, all earthworks and laying of stone base have been substantially completed. Preparation of bridge plans is in hand.

(f) **Muara Port Roads - \$1,369,000 - 3¾ miles**

The access roads to the Pilot's Jetty and the Signal Station, and the short-cut from wharf to Muara shops have

PUBLIC WORKS AND UTILITIES

been added to other out-standing works on this project. At the end of the year, the roads to pilot's jetty and signal station were laid with a stone base while earthworks on the short-cut which commenced later in the year, was still in progress. Sidetable construction and finishing for the other $3\frac{1}{2}$ miles were completed.

(g) **Muara Industrial Area Roads** - \$1,000,000 - 2 mile

Construction over deep swamps is involved. About $1\frac{1}{2}$ miles of partially built earth road have been done mainly to serve as access for site clearings over the area. A 50 feet span temporary Bailey bridge was erected.

4. Other roadworks done during the year:-

(a) **Kampong Perpindahan Roads** - One mile of access road was laid with stone base and given a light bituminous seal.

(b) **Jalan Kumbang Pasang** - Resurfacing from Jalan Tutong junction to Tapak Kuda was done.

(c) **Jalan Kg. Kianggeh** - Hot-mixing of whole length up to pump House was completed. Sidetable construction in progress.

(d) **New Airport Approach Road Roundabout** - Joining of the last leg of the new roundabout to Jalan Muara was completed in November.

(e) **B. S. B./Jalan Muara Link Road** - Investigations and preparation of plans still in progress. A 2-mile bulldozer track has been pushed through to assist in the investigations over this rough terrain.

PUBLIC WORKS AND UTILITIES

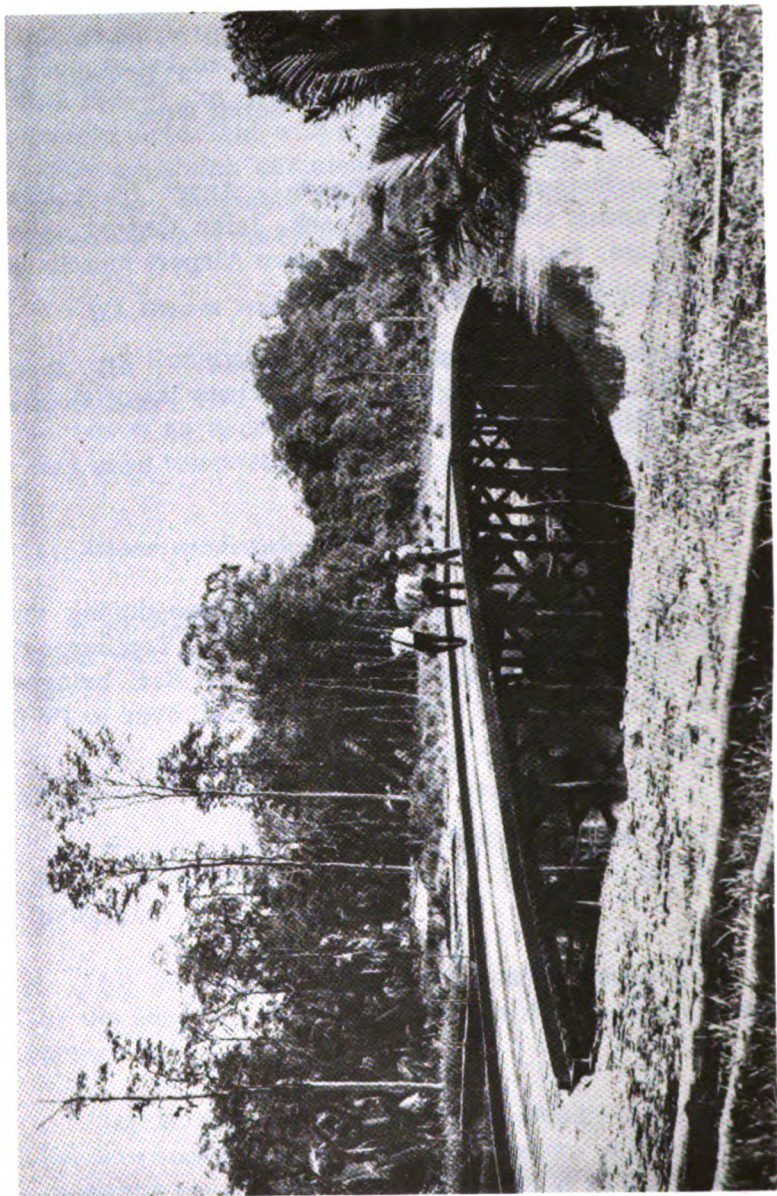
(f) **Resurfacing of B.S.B./Kuala Belait Trunk Road** - Approximately, $4\frac{3}{4}$ miles was resurfaced. This does not include resurfacing done on the Kuala Belait side.

(g) **Resurfacing of B. S. B. Roads** - Apart from Jalan Kumbang Pasang above, Jalan Tasek, Jalan Gadong up to Gadong Bridge, and Jalan Berakas from Airport junction to Istana Tetamu were also resurfaced.

(h) **New Airport Naval Access Roads** - All three access roads to VHF Transmitter Site, VHF Receiver Site were sealed during the year.

Bridges

No new construction of bridges was done during the year, except those under Consultants in Temburong. Together with the new roads, the twelve (12) R.C. bridges completed by them in that district were turned over to PWD for maintenance.



A wooden bridge spanning the Meragang River in Labu Estate, Temburong District.

PUBLIC WORKS AND UTILITIES

Miscellaneous Works

6. other works done:

(a) **Construction of access road** from Jalan Kota Batu to the new jetty at Kampong Dato Ghandi was completed.

(b) **Resurfacing of Bandar Seri Begawan Wharf/Apron** was completed.

(c) **Site preparation at Muara Incustrial Area- 50 acres**
Forty acres of clearing was completed. Survey and investigations for site filling were in progress as the year ended.

(d) **Clearance of Approach Areas at New Airport** - cutting of hill obstructions was completed and tree clearing at the south end of the runway was still in progress.

Kuala Belait/Seria Road

Sungai Liang: Labi Road

Scheme Value	.....	\$12,952,894,00
Project Length	.....	29 miles

(a) Work Carried out during the year

- (1) Road formation completed on principal road and $1\frac{1}{2}$ miles of road formation completed on Labi Link Road.
- (2) Soil-cement stabilisation from 14th to 18th miles from Sungai Liang junction.
- (3) Hot-mix surfacing from mile 10.75 to mile 11.75 and from mile 12.6 to mile 14.5 from Sungai Liang junction.
- (4) Grass;planting to 1.3 miles of shoulders and 5 miles of cuts and slopes.

(b) Total work accomplished

Road formation complete except for 1 mile at Labi link road, 114.5 miles of hot-mix surfacing has been carried out with a further 3 miles of prepared base. 5 nos. R.C. bridges completed.

(c) Work in Progress:

- (1) Road formation on the last mile along Labi link road.
- (2) Continuing work on soil-cement stabilisation.
- (3) Hot-mix surfacing to be done on prepared base as soon as hot-mix plant and personnel from Bandar Seri Begawan are available.

(d) Expenditure for the year is \$1,335,673.00 (provisional) and estimated total expenditure by end of 1972 is \$9,300,000.00.

Kuala Belait/Brunei Trunk Road (Road Widening)

The last remaining section of 5,600 ft. (1.06 miles) from Mile 1 to the access road leading to B.S.B. ferry was laid with hot-mix. This completed the Road Widening programme.

Kuala Belait New Link Road

This road is 18,500 feet (3.5 miles) long. The last section of 6,980 feet (1.32 miles) was given out to Contract and the work consisted of laying curb stones, transportation and spreading of stones to required levels and other ancillary works. Overall progress achieved for the year:-

PUBLIC WORKS AND UTILITIES

	1972	1971
Survey	100%	100%
Clearing and Grubbing	100%	100%
Earthwork	100%	100%
Base Course	89%	68%
Sealing Coat	90%	54%
Grass Planting	90%	70%
Bridges	-	-
Drainage	80%	40%

Bridges

1)	Steel	1
2)	Bailey	9
3)	R. C. Deck	38

Air field

The P.W.D. Gang continues to maintain the runway and the surrounds at the old airfield.

With the opening of part of the runway of the New International Airport to take Boeing 737's the gang now has also to maintain signs at this new Airport. Areas, where landing guidance equipment are installed, have also been completed and come under maintenance.

Road Construction Materials:

1) Stones - 57,000 tons of locally obtained stones were used during the year. This shows a drop compared to previous year., The cost of uncrushed stones went down to \$9.25 per ton.

PUBLIC WORKS AND UTILITIES

2) With the higher quality granite aggregates from Singapore, 30,000 tons were used, mostly for hot-mix. The cost of there aggregates remained the same as in previous year.

3) **Cement** - 5,000 bags were issued from Berakas Depot, the cost remaining at \$4.00 per bags as of last year.

4) **Bitumen** - Brunei Shell Petroleum's contract for the supply of this material was renewed for another period of 3 years from October, 1972. The price increased to \$118.00 per ton for bulk bitumen (vs \$110.00 per ton in last contract), \$121.50 per ton for bitumen in returnable containers and \$135.00 per ton for those in disposable drums. A quantity of 2,000 tons of bitumen was used during the year for hot-mix and other uses.

Barakas Depot

Production output at Berakas Depot during the year was:

(a) Hot Bitumen	3,300 gals.
(b) Emulsified Asphalt	30,900 gals.
(c) Hot-mix	40,300 tons
(d) R.C. Culverts	4,400 ft. run.
(e) Precast Concrete Products	2,600 cu. ft.

Workshops

The Public Works Department operates major Workshops at Bandar Seri Begawan and Kuala Belait fully equipped with machine tools to undertake all classes of

PUBLIC WORKS AND UTILITIES

vehicle and plant repair and overhaul, addition to service depots for field maintenance of plant at Berakas Camp, Temburong and Bukit Puan. The number employed in these Workshops total 500 men in Bandar Seri Begawan and 149 in Kuala Belait.

Although a few otehr departments have service depots for the upkeep of their mechancial plant (mainly transport) the P.W.D. Workshops provide repair facilities for all Government holdings, in addition to routine servicing facilities for the majority of Government vehicles.

With the increasing interest taken by local business firms in haulage, earth-moving and light mechanical repair works, it has become departmental policy to confine P.W.D. Workshop facilities and plant purely to Government requirements and not to intrude into the private or commercial sector. However, dedemands are occasionally received for heavy transport, or Workshop operations, where private equipment is unavailable to provided the necessary service, and in such case work is undertaken by P.W.D. at appropriate charges.

The two landing crafts owned and operated by this department have been on regular charter to the Askar Melayu for transport of troops and materials between Bandar Seri Begawan and Temburong, and have continued to make a useful contribution to the development effort to the country in handling heavy items of contractors' plant for transport between Brunei/Labuan/Temburong. The revenue earned by these vessels during the year was \$120,000.00.

PUBLIC WORKS AND UTILITIES

Repair jobs done during the year compared to those of 1971 were :-

	1972	1971
Major repairs P.W.D. plants	58	86
Minor repairs P.W.D. plant	4,595	3,883
Other works (mainly for other depts.)	3,599	3,434
No. of vehicles serviced	3,840	2,151

Difficulty in the acquisition of spare parts from the distributors of vehicles and plant from whom they were purchased is still encountered and ordering of light items by air freight from Singapore and Malaysia, although rather expensive, has been resorted to, in order to avoid excessive down time on equipment under repair.

Plant and vehicles submitted for survey and write off during the year :-

Materials processing and road making plant	5 units
Heavy vehicles	28 "
Light vehicles	12 "

Plant and vehicles purchased and received during the year included :-

Bitumon Hot Mix Plant	1 unit
Bitumen Tanker sprayer (Truck Mounted)	1 "
High pressure jetting equipment (Truck mounted) for Sewerage plant	1 "
Heavy vehicles	30 units
Light vehicles	3 "
Light vibrating roller	2 "

PUBLIC WORKS AND UTILITIES

Departmental holdings at the end of the year :-

Earthmoving and road making plant	207 units (210 units in 1971)
Heavy vehicles	232 units (230 units in 1971)
Light vehicles	76 units (85 units in 1971)

Employees detailed for training outside the Department have been:-

Government Engineering Trade School Kuala Belait.
Taking Automotive Mechanics 2 men

Marine Navigation School, Labuan, Sabah.
Taking Engine Driver 3rd Class 1 man

TOTAL 3 men

BERAKAS CAMP

A great deal of effort was expended in meeting the requirements of the Royal Brunei Malay Regiment, the major projects which were completed including :-

6 blocks Singlemen's Barracks	\$678,000.
4 units Class 'G' Quarters	\$120,000.
Signal Centre building	\$134,000.
2 Class 'C' Quarters	\$170,000.
2 Standby Generating Stations	\$ 71,000.

PUBLIC WORKS AND UTILITIES

While in progress :-

3 Class 'C' quarters	\$254,000.
7 Class 'C' quarters	\$627,000.
6 N.C.O. 's flats	\$142,000.
Dhobi Lines	\$227,000.
Transit and Paint Store	\$ 99,000.
2 blocks of buildings for Logistic Depot	\$244,000.
Combat Engineer's store	\$ 74,000.
Drains and retaining walls by C.O. 's bungalow	\$ 62,000.
8 units class 'G' Quarters and 1 block barracks	\$622,000.

As in previous years development work at the Camp entailed the provision of a separation construction group under a Civil Engineer. Apart from buildings and their services, the problems of erosion and soil conservation demanded constant and knowledgeable attention. Although it is believed that the most serious erosion problems have been dealt with, but it is still necessary to maintain a small departmental labour force with earth-moving plants for site preparations and the remaining anti-erosion works. However, the camp definitely bears little relation to the alarming earth erosion conditions which prevailed five years ago.

(b) SURVEY

General

The allocation of expenditure for Labour in 1972 was reduced considerably and as all survey parties comprised mainly of daily rated employees it was necessary to reduce the number of survey parties and regrettably making 35 employees redundant. With reduction of survey parties the output of field surveys throughout the year was also reduced.

Throughout the year as in previous years the department was mainly employed on work through sub-division of land. A great number of partitions were undesirable, but with no proper sub-division control all requests had to be surveyed as desired by the land owners.

The Assistant Director of Survey Hongkong and the Map Research Officer, Hongkong visited the department and had discussions with the Surveyor General on mapping in general.

The department continued giving assistance to Government departments and consultants in both survey and copy printing.

Field Surveys

Surveys for land and sub-division, acquisition of land for roads and Government Reservations were the main task throughout the year.

Three new tertiary Triangometrical Stations were established in Muara Bay area to provide additional control for the survey of Muara Port. Navigation beacons were

also surveyed near the end of the year and the information would be forwarded to the Admiralty through the Director of Marine, Brunei early in 1973 when the port will be opened to shipping.

Nabigation aids for the new Brunei International Airport were surveyed and co-ordinates given to the Director of Civil Aviation.

Survey Drafting

A start was made on the re-drafting of all land plans on the Rectified Skew Orthomorphic projection at a scale of 1/2,500. The initial plotting of all co-ordinated points was carried out on an electronic plotter from co-ordinates on tape. This electronic plotting was carried out by Messrs. Brunei Shell Petroleum Co. Ltd. Seria. On completion of the plotted co-ordinated points, compilation commenced on drafting all land boundaries. Considerable thought was given to the drafting media to be used for the new master plans and it was decided that scribe coat plastic sheets would be used. On completion of scribed master plans intermediate film positives (drafting surface) would be contacted as working sheets. The new master plans were only partially completed during 1972 but it was found that by using scribing techniques the quality and speed was a great improvement to the pen and ink method of drafting.

Certified and Gazette Plans continued to be drawn on mounted cartidge paper but at natural scales of 1/2,500 and 1/1,250 instead of 4 chains and 2 chains to an inch scales.

PUBLIC WORKS AND UTILITIES

Mapping

The revision of the T735 series, 1/50,000 scale maps continued and Tutong and Tasek Merimbun sheets were in bulk from the printers. Compilation and scribing of the Seria and Kuala Belait sheets was partially completed.

New sheets of 1/12,500 scale Br. 931 series of Kuala Belait - Seria progressed and Sheet A was completed and sent to the printers.

A new sheet map of Kuala Belait and environs was completed and forwarded to the printers and should be available to the public early in 1973. The colour proofs of Br. 931 series, 1/12,500 scale maps of Brunei/Muara District were received, checked and returned for printing. This series will be the first map sheets published to show in detail the new Brunei International Airport which will be opened to all air traffic in 1973.

Survey Computing

Survey computation for land sub-division land operated calculating machines were used throughout the year. The need for electronic calculators and desk top computers still under consideration.

Besides the routine work of calculation of boundary surveys, the transformation of R.S.O. grid co-ordinates in terms of Geographical co-ordinates was carried out for a number of stations in connection with the International Airport and Muara Port. Calculations were also made for the sighting of the Moon at Ramadan.

PUBLIC WORKS AND UTILITIES

Photographic Printing & Microfilming

This section was fully employed throughout the year providing photographic prints for both Government departments and the Public. There were no major break downs in the machines being regularly maintained by the departments machine supervisor. A new Ammonia printer was purchased during the year which proved to be more efficient than the semi-dry printer.

The microfilm machine was not in full operation and only the Brunei Museum requested microfilming. It is regretted that other departments of Government do not evaluate the use of microfilm. Several private firms made use of the microfilm service during the year.

PROGRESS FOR YEAR 1972

Drafting Section	JOBS APPROVED	
	1971	1972
Sub-division	191	213
Land Applications	1	3
Gazette Plans	28	23
Certified Plans	144	214
EDR's prepared	924	901
Computing Section		
Jobs approved	270	270
Field Section		
Land Applications	7	5
Sub-divisions	213	199

PUBLIC WORKS AND UTILITIES

Gov't Reserves	26	38
Revision	56	27
Control	3	4
Road Acquisition	41	29
Miscellaneous Jobs	25	13

Printing

Dyeline & Reflex Printing	23,076 ft.	36,070 ft.
Photostat Printing	15,544 ft.	22,050 ft.
Film Negatives/Positives 30 30" x 40"		500 sheets

Revenue through:-

Sub-division of land	\$56,973	\$68,802
Map & Printing Sales	\$13,864	\$13,864

New Maps Printed

Series T 735

Sheet 4/114/3 Tutong
Sheet 4/114/7 Tasek Merimbun

Map Extracts

Bandar Seri Begawan
Tutong
Tasek Merimbun.

(c) Electricity Supplies

During the year under review, the 11kV and low voltage networks were expanded and improved.

The load continued to grow at a high rate, the maximum demand varying from an average peak load of 16MW to approximately 24MWs when the L.N.G. plant at Lumut was drawing power from the Government Power Station at Seria. Total units generated by the department's power stations during the year amounted to 110,791,129 compared to 69,903,958 units generated during the year 1971.

With the No. 4 Gas Turbine at Seria Power Station coming into commercial operation on 20th April, 1972, the station capacity was much improved. The station in its own was thus fully able to meet the requirements of the L.N.G. plant at Lumut during the commissioning period as also during its operation.

Current development of the transmission system was completed with commissioning of the 33kV and 66kV substations at Seria and Lumut respectively, thus directly connecting up the B.S.P.Co. Limited and Government Seria Power Stations and interconnecting the Government Seria Power Station with the L.N.G. Power Station at Lumut.

For a more equitable sharing of the load by the two 15 MVA transformers at Gadong Power Station and as another alternative supply to the central area of the town another underground supply ring is being provided. To this effect cable laying is in progress and it is expected that this supply ring will be put in operation during the second quarter of the coming year.

PUBLIC WORKS AND UTILITIES

In spite of late access to the site and some subsequent frustrations at the new Brunei International Airport, the Electrical Department was able to connect the supply before the first Singapore Airlines Boeing 737 touched the tarmac of the new airport on 1st November, 1973.

As in the previous years rural electrification continued to extend and total of 14 kampongs/villages were supplied with electricity, the same number as the previous year. Extensions to the 11kV serial cable network are still continuing and it is hoped that rural electrification will be continued during the coming year.

GENERATION

With the commissioning of No.4 Gas Turbine at the Seria Power Station, the total capacity of the station rose from 30.75MW to 46.75MW. There were no major troubles and the station continued to run satisfactorily.

Towards the end of the year the No.3 Gas Turbine, after replacement of its rotor, was put on test to check its vibration, and found to be satisfactory. But when, after warming up, the set was put on load for further vibration tests it tripped out. On checking it was found that the stator winding was punctured. Necessary spares are now awaited and it is hoped to have the set repaired and in operation some time during the second quarter of 1973.

When the erection and installation of the steam generators was completed at the L.N.G. Power Station at Lumut, the station was successfully run in parallel with Seria and after commissioning tests, is now operating normally. The Government Power Station is now providing standby power according to the agreement now in force.

PUBLIC WORKS AND UTILITIES

Gadong Power Station continued to operate satisfactorily as a standby station and booster for Seria Power Station. Its installed capacity remained at 11MW. With the load demand from this station being within acceptable limits and likely to continue so for the next few years, no decision has yet been made for the replacement of the damaged 3MW Ruston Diesel set. When the loadings required by the next 5 years Development Plan are known, it will be possible to judge what additional standby power may be required at Gadong.

Table A below gives the installed capacity of each station at the close of the year, the total units generated and/or purchased and the maximum load recorded at each station during the year under review as compared against the previous year.

T A B L E A

Station	Installed Capacity in K.W.		Units generated and/or Purchased		Maximum Demand in K.W.	
	1971	1972	1971	1972	1971	1972
Bandar Seri Begawan	11,000	11,000	4,273,280	1,858,640	-	-
Seria	30,750	46,750	64,734,000	108,474,100	14,300	23,400
K. Belait & Seria	-	-	*175,218	*195,231	-	-
Temburong	860	860	721,460	458,389	200	160

*Denotes units purchased

TRANSMISSION LINES AND SUBSTATIONS

In addition to the provision of the 33kV and 66kV/sub-stations at Seria and Lumut, a third 15MVA 66/11kV transformer is in the course of being installed at Seria Power Station to provide necessary further capacity. At the close of the year all foundation works for the transformer and O.C.Bs were completed, the transformer put of its base and the bus bar equipment installed. Delay in the receipt of the 66kV O.C.Bs and the transformer radiators has held up completion. It is expected to have the transformer in commission some time during the second half of the coming year.

All transmission lines were regularly patrolled and monthly maintenance work carried out on all substations throughout the year.

DISTRIBUTION

The following are major works completed or in the course of construction during the year.

1. Brunei International Airport

- (a) Electricity was connected through 2 - 500kVA transformers fed by an underground cable supply ring main. Almost 45% of the cable terminals for the runway lighting fittings were completed.
- (b) The N.D.B. Transmitter at Jalan Gadong was supplied by electricity through a low tension line from the new M.R.U. Police substation.

PUBLIC WORKS AND UTILITIES

- (c) Kg. Gadong Transmitter was given supply by an overhead low tension line from the Gadong 66/11kV substation.
 - (d) The Berakas receiver station was energised through an overhead low tension line from Costain substation.
 - (e) The V.O.R./D.M.E. station off Jalan Berakas was supplied by electricity by installation of a new substation extended from the Askar Melayu Di-Raja Officers' Mess substation.
 - (f) I.L.S. transmitter at Berakas beach was supplied by electricity from the V.O.R./D.M.E. 11kV substation by low tension underground cable.
 - (g) Runway substation - 80% of the underground cable has been laid out while 90% of the 11kV switchgear has been erected. Pending completion of the runway it is expected to commission the substation early next year.
2. The existing aerial cable line along Jalan Kota Batu has extended from Kampong Dato Gandi to Kampong Belukot a point approximately 6 miles from Bandar Seri Begawan.
3. The main 11kV Lamunin to Layong line to supply the headworks of the new water supply was completed and energized.
4. An aerial cable line strung on steel poles was run along Jalan Lamunin to a distance of 1 mile from mile 18 66kV substation to supply houses along the road.

PUBLIC WORKS AND UTILITIES

5. Aerial cable extensions strung on steel poles from Kampong Subok to Malay School completed. The line has not yet been commissioned pending laying of underground cable.
6. New low tension overhead lines erected along Jalan Gadong and Jalan Jerudong electrifying 5 kampongs on the way.
7. Improvements to existing low tension overhead lines at Kampong Manggis along Jalan Muara, Kampong Lombok along Jalan Berakas and within the army camp at Berakas were affected due to increase of consumers.
8. Deviation of low tension lines along Jalan Muara was carried out to make way for water pipe lines.
9. Deviation of high tension underground feeder cables was carried out at the junction of Jalan Berakas and Jalan Muara to make way for the construction of a "Roundabout"
10. Upgrading the existing transformers at the 11kV sub-station at Askar Melayu Camp from 2 - 300 kVA to 2 - 500 kVA.
11. Upgrading the existing transformer the 11kV sub-station at Kampong Anggerak Desa from 150kVA to 300kVA.
12. A new aerial cable line strung on steel poles erected from Banagar Power Station to Kampong Puni, a distance of approximately 3 miles.
13. Extensions to the existing aerial cable system made at Sungai Liang to a distance approximately $2\frac{1}{2}$ miles.

PUBLIC WORKS AND UTILITIES

14. As a permanent link between the Government Electrical Department and the British Shell Petroleum Co, distribution networks at Kuala Belait a new 1,000kVA 11/6.6kV substation has been erected in the B.S.P. Marine construction yard.

15. A new standard type substation comprising 2 - 500kVA transformers was erected to replace the old 500kVA capacity pocket unit type substation at Kuala Belait.

16. Kuala Belait Jalan Laksamana substation reinforced by adding one 500kVA transformer to the existing 300kVA transformer.

The following tables B, C & D give details of substations erected and dismantled, underground cables laid and overhead lines erected and dismantled :-

TABLE B SUBSTATIONS

DISTRICT	Substations Erected			Substations Dismantled		
	No.	TYPE	Total Capacity in K.V.A.	No.	Type	Total Capacity in K.V.A.
BRUNEI AND MUARA	2	Standard	2,300	-	-	-
	6	Pocket Units	*3,300	-	-	-
	10	Outdoor	**2,600	5	Outdoor	**2,500
	5	Pole Mounted	250	-	-	-
KUALA BELAIT AND SERIA INCLUDING LABI	1	Standard	*1,500	-	-	-
	3	Pole Mounted	150	-	-	-
	1	Outdoor	1,000	-	-	-
				1	Pocket Unit	500
TUTONG TEMBURONG	2	Pole Mounted	20			
	4	Pole Mounted	65			

* Includes transformers erected due to increase of load.

** Includes transformers erected and dismantled at L.N.G. construction site at Lumut.

PUBLIC WORKS AND UTILITIES

TABLE C - UNDERGROUND AND AERIAL CALBES

District	Underground Cable Laid in Metres		H.T. Aerial Cable Strung in Metres.
BRUNEI AND MUARA	7,620	33,166	4,500
KUALA BELAIT & SERIA INCLUDING LABI	200	* 8,800	3,750
TUTONG	560	1,450	-
TEMBURONG	360	420	3,500

TABLE D - OVERHEAD LINES

	Total Amount of Conductors in Metres			
	Erected		Dismantled	
	H. T.	L. T.	H. T.	L. T.
BRUNEI AND MUARA	-	55,400	-	7,381
KUALA BELAIT & SERIA	-	10,000	-	823
TUTONG	3,600	2,500	-	-
TEMBURONG	-	12,000	-	-

CONSUMERS SECTION

There has been an appreciable number of new consumers connected to the system during the year. The introduction in 1971 of the system of charging deposits for consumers occupying rented quarters has been successful.

Increased use by Procon Ltd. and L.N.G. plants at Lumut and the increases in the general use of power by the public brought nett sales of electricity to a record 91,437,748 units, an increase of 32,733,982 units or 55.8% over the year 1971, when sales totalled 58,703,766 units.

The departments maintained and kept in effective repair all installations in public buildings and Government quarters, replacing wiring when and wherever found necessary to do so. New installations were all inspected and tested before being given a supply.

New meters before being put to use in consumers' premises were first tested in the Meter Testing room. Old meters brought in were recalibrated before being sent out again.

Table E below gives details of the units sold during the year under review as against the year 1971 and the number of consumers connected to the system as at 31st December, 1972 against 31st December, 1971.

PUBLIC WORKS AND UTILITIES

TABLE E

	Units Sold		No. of Consumers as at 31st December	
	1971	1972	1971	1972
BRUNEI	39,705,599	43,750,414	7,089	7,400
KUALA BELAIT AND SERIA	15,857,346	44,488,988	2,751	2,920
TUTONG	1,297,970	1,924,702	1,298	1,549
TEMBURONG	505,399	345,836	233	338
MUARA	1,337,452	927,808	240	258

HIRE PURCHASE SCHEME

Fresh applications continued to come in ever increasing numbers so much so that it became impossible to deal with the accumulation owing to the limited staff and the financial position of the scheme. Hence, by S.U.K. Circular, fresh applications were discontinued until such time as the backlog could be cleared.

PUBLIC WORKS AND UTILITIES

Details of the number of appliances sold under the scheme are given in the table below.

TABLE F

Appliances	Brunei including Tutong, Temburong and Muara		Kuala Belait and Seria	
	1971	1972	1971	1972
Refrigerators	583	473	309	323
Fans-table, ceiling,	102	121	58	54
Washing machines	188	286	38	59
Cookers	96	74	-	-
Food Mixers	13	38	-	-
Air Conditioners	2	14	3	2
Vacuum Cleaners	1	11	-	-
Freezers	2	1	-	-
Electric Motors	1	1	-	-
Rice Cookers	4	-	3	16
Fry pans	-	-	-	-
Ovens	10	-	-	-
Kettles	4	6	-	-
Blenders	2	-	-	-
Floor Polisher	1	-	-	-
Toaster	-	1	-	-
Iron	-	1	-	-

PUBLIC WORKS AND UTILITIES

AIR CONDITIONING SECTION

A total of 155 new window type air conditioning unites of various sizes were installed in Government offices and buildings during the year against 149 units in 1971. In addition 1 - 30 h.p. package type air conditioner was installed.

Regular servicing and maintenance of all air conditioning units were carried out by contractors under the supervision of the Department's Air Conditioning Engineer.

STREET LIGHTING SECTION

High pressure sodium vapour street lighting was installed along Jalan Residency in Bandar Seri Begawan and at the new roundabout at the junction of Jalan Muara and Jalan Berakas. It is expected that in 1973 the double carriage road leading from this roundabout to the new International Airport will also be lighted up with this type of lighting.

Similar illumination provided by sets of 4 - 180 watt tubes, mounted on 60 ft. high masts will serve Muara deep water port.

Details of street lights of various types installed and commissioned during the year are as given below :-

District	No. of Lamps Commissioned		
Brunei and Muara	--	--	423
Kuala Belait & Seria	--	--	45
Tutong	--	--	30

PUBLIC WORKS AND UTILITIES

Maintenance work and repairs were carried out throughout the year. Damage to traffic lights and lamp standards caused by accidents was made good in prompt order.

Decorative illumination was provided by the Department at the Istana, Town Mosque, Government offices and buildings on the occasion of the visit of H.M. the Queen, H.H. Birthday Celebrations and other religious civil ceremonial occasions.

STORES

The stores functioned smoothly. The needs of the department were met by the normal indenting procedure with some local purchases from time to time as required.

TRANSPORT

The department has its own small motor vehicle repair Workshops when regular maintenance and servicing of its vehicles based in the Brunei, Muara and Temburong districts is carried out. Adequate staff is based in the workshops to carry out periodical overhaul and repairs, including body paintwork and welding, of all its vehicles.

STAFF

Good relations continued to be maintained between all sections and in general an adequate and efficient service is provided for the community.

PUBLIC WORKS AND UTILITIES

There is shortage of senior staff especially at the Seria Power Station where additional Charge Engineers are urgently required to carry out the extra maintenance duties of the new water and sewerage services.

Should there be any significant increase in the services to be provided consequent upon a new development plan the Department would be starved with the present staff. There is hope that some recruiting of new staff is possible in the near future.

(d) STATE STORES & SUPPLIES

The Department had another satisfying year of trading. The total business transacted during the year amounted to more than \$21. million. Materials handled were 18,373 tons made up from more than 285,000 packages.

This Department operates three Trading Accounts. The respective trading figure for the year are as shown below:-

	Purchases	Sales	Stock Balance
Unallocated Stores			
General	\$1,221,393	\$1,049,237	\$1,407,656
Workshop	1,445,360	1,408,395	1,371,817
Essential			
Foodstuffs	8,150,478	8,350,302	6,428,793

The total purchases therefore amounted to more than \$10.8 million and sales also \$10.8 million. The value of stock holding at the end of the year was \$9.2 million. The main items of purchase under Essential Foodstuffs had been Rice and Sugar. Both are controlled commodities whose

PUBLIC WORKS AND UTILITIES

selling prices are fixed by the Government. More details of these items are given below:

RICE The Department continued to purchase Rice from Thailand on a Government to Government basis. The Agreement signed in 1971 was renewed on the same terms for 1972. A Total quantity of 9,500 metric tons Thai White Rice 100% Class B to the value of \$3,822,255 was imported during the year. The average price paid was S£60. per metric ton f.o.b.

Sales for the year amounted to 110,951 bags or 11,095 metric tons. This quantity was the highest ever recorded so far. Its value amounted to \$4,929,889. Stock held at the end of the year was 61,019 bags.

Rice was retailed at \$1.80 per gantang in Bandar Seri Begawan, 40 cents cheaper from the previous year.

SUGAR During the year 130,094 bags equivalent to 6,504 metric tons were purchased with a value of \$4,322,296. Sales were 111,716 bags amounted to \$3,417,952. Stock held at the end of the year was 84,907 bags of 50 kilos each.

Sugar was retailed at 46 cents per kati in Bandar Seri Begawan. An increase of 12 cents from 1971 due to the higher market price of this commodity.

MILK Both powdered and condensed sweetened milk were held in stockpile. They were not sold directly to the market but the stock was rotated through exchange for the fresh imports of the local distributors. A total of 29,536 cases of milk was exchanged during the year.

CHAPTER 12

A-BRIEF HISTORY OF BRUNEI

Archeological works and the discovery of relics in Brunei and neighbouring Sarawak indicated that Brunei was an old established Malay State. This fact was supported by historical data, especially in reference to Chinese History, which showed that Brunei had a wide connection with her neighbours on the Asian continent around the sixth or seventh century A.D.

Chinese History dating 518, 523 and 616 A.D. related to the visits of envoys from Po-lo, Po-li, Pori, Ye-po-ti; a country of 45 sailing days from China. This coincided with the old location of Brunei.

Various names with many versions had been given to Brunei in the 19th century, Burni, Bourni, Bournee, Borney, Borne and Borneo were referred by the English before the 19th Century, and thereafter, it was commonly referred as Brune, Brunei, Bronei and Brunei. The Dutch on the other hand had given rather far-fetched names such as Berow, Barow, Barau, Beraw and the likes. Accordingly "Brunei" is perhaps a Sanskrit word meaning "Seaform". This presumption could be aptly accepted because the present proclamation of the titles in the Royal Court have shown Hindu influence brought about by Seri Wijaya.

Before the coming of Islam to this part of the world the history of Brunei was vaguely recorded and this made it difficult to determine ancient relics. The Majapahit Empire collapsed and in its place Malacca became the source of influence. It was around this time that Brunei became an

A BRIEF HISTORY OF BRUNEI

Islamic State when Sultan Muhammad, the first Sultan of Brunei, embraced Islam on his marriage to a Princess of Johor.

The history of Brunei showed that Brunei played a major role in the propagation of Islam. In the 15th and 16th Centuries, Islam propagators from Brunei travelled to Celebes, Tidore and Ternate. This was also the beginning of Brunei expansion as a power in this region.

Following Brunei's territorial expansion, her relationship with Malacca and China was suspended and this remained so until Malacca fell to Portugese in 1511. Brunei maintained her power and her independance from foreign influence until the end of the 19th century.

Brunei was made famous and powerful by two sultans. The first was sultan Bolkiah, the 5th Islamic Sultan of Brunei and the son of Sultan Sulaiman. The second was Sultan Hassan, the 10th Islamic Ruler who was also known as "Al-Marhom Di-Tanjong", and even up to the present time his tomb is still located at Tanjong Chendana at the mouth of Brunei River. It was said that during the reign of Sultan Bolkiah the power and influence of Brunei extended to as far north as the Philippines. Sultan Bolkiah was known for his travelling and whenever he went, he took along his Royal Orchestra. Thus he was widely known as the "Nakhoda Ragam". From the Chronological history of the Sultan's of Brunei, it was Sultan Bolkiah who conquered Seludong (Manila) and later married the daughter of Dato Gamban, ruler of the territory. For a period of time Seludong had to pay annual tribute to Brunei.

Sultan Hassan was the architect for the Pulau Chermin Fortress and the bridge connecting Tanjong Chendana and Pulau Chermin. During his reign elephants were introduced to add to the colour and splendour of the Royal Court. The Court was to become the Royal hereditary customs of today. These customs were similar in many ways to those found in Aceh. Many visitors from the West who came to Brunei during Sultan Hassan's reign had found that Brunei was producing brass cannons of much superior quality than any of those made in the Malay World. Several of these cannons were later brought along by visitors to Europe.

It was Sultan Hassan who was regarded as the most famous and powerful of all Brunei Islamic rulers. Brunei's jurisdiction covered the whole island of Borneo and the surrounding north of it. Sulu Island had to pay tribute and close family ties resulted between Brunei and Sulu. He married Princess Betara of Sulok and one of their sons, Pg. Shahbandar Maharaja Laila was later to ascend as the ruler of Sulok Islands.

The influence of the Brunei continued until the coming of the Europeans. Ludrico de Vartane, an Italian, was among the earliest visitors to Brunei in the years between 1505 and 1507 A.D. In 1516 Barbose, a Spaniard, visited Brunei and he was later followed by Anthony Pigafetta in 1521. The later accounted that :

'The city is entirely built in the salt water, the King's house and those of some of the chieftians excepted. It contains 25,000 fires of families. The houses are all of wood, and stand on strong piles to deep high from the ground. When the flood tides make, the women in boats , go through the city selling necessities. In front of the King's palace there is a rampart constructed of large bricks with barbicans in the manner of a fortress, on

which are mounted fifty-six brass and six long cannons. During the two days we passed in the city many of them were discharged. The King is a Moro (a) and his name Raja Siripada (b) he is forty years old and corpulent. No one serves him except women who are the daughters of chiefs. He never goes outside his palace, unless when he goes hunting, and no one is allowed to talk to him except through the speaking tube. He has scribes, called xiricoles (c) who wrote down his deeds on very thin tree bark.

"On the 29th July, being Monday, we saw coming toward us more than hundred praus, divided into three squadrons, and with them an equal number of Tungulis (?), which are their smallest barks. Seeing this and apprehensive of treasons, we anxiously make sail and in our haste left an anchor in the ground. Our suspicion increased when we observed that behind us, there are certain junchi (junks) which have come here the day before. Our first business was to disengage ourselves from the junks, and we open fire on them capturing four and killing many persons. Three of four junks run around to save themselves. In one of those which we took we found the son of the King of the island of Luson (Luzon), who was the captain-general of the King of Brunei, and who had come with the junks from the conquest of the great city of Lae, situated at the end of that island opposite to Jaya Maggoire (probably some place in Banjar Masin). He had made the expedition and snacked the city, because the inhabitants wishes to obey the King of Java in preference to the Moorish King of Brunei. The junks, made haste to inform us through one of our people who was ashore trading, that the praus no means intended to do us harm, but to make war on the gentiles, in proof which they showed us some heads of those whom they had killed".

A BRIEF HISTORY OF BRUNEI

Some suggest the Figafetta's account is perhaps too much an exaggeration. Nevertheless, it is believed that at the beginning of the 16th century Brunei was a powerful kingdom and that during Pigafetta's visit, Brunei was under the rule of Sultan Abdul Kahar who was said to be about 40 years of age about the time of Pigafetta's visit.

From 1530, Europeans visitors to this part of the world kept on trying with great effort to hold power in Brunei in view of her being the centre of the power in the Malay world. In 1577 A.D. the Spaniards, who were the occupying Philippines, paid a visit to Brunei with the intention of seeking permission to trade and to propagate Christianity. They also requested the Sultan of Brunei to forbid Bruneians from propagating Islam in the Philippines. Their request met negative response from the Sultan Saiful Rijal and in anger the Spaniards attacked Brunei early the following year with the help of two traitors, Pg. Seri Lela and Pg. Seri Ratna. In August 1578 the Spaniards occupied Brunei and the seat of Government was transferred to Ulu Mergang. The leadership was taken over by the Sultan's brother Pg. Bendahara Sakam who drove the Spaniards from Brunei. The Spaniards, however, renewed their attack in 1645 and was repulsed. Both the Portuguese and the Spaniards failed to secure any territory in Brunei.

Towards the later part of the 16th Century, the English and Dutch begin to exert influence in southern Borneo and eastern fell to the Dutch.

The British influence began in 1609, but it was not until 1701 that a trading post was set up in Bandjarmasin. In spite of this the British failed to gain power in Southern Borneo until the came in the middle of the 18th Century.

In 1762 Sultan Aliuddin of Sulok, ceded Balambangan to to the British, but in 1774 British activities there were temporarily suspended as their attention was diverted to the to the Malay Peninsula.

In the 19th Century, Borneo was turned into a field for power struggle among the British, Dutch, Portugese and the American. Notable among the British were Brooke in Sarawak, Baron de Overbeck and Alfred Dent in Sabah. Brooke named himself "Rajah of Sarawak" and he remained in power by virtue of the 1841 Agreement with Brunei. Baron de Overbeck got himself the title of Maharaja of Sabah apart from being Raja of Java and Sandakan. The Dutch were successful in the southern part of Borneo, and by 1904, Brunei became a tiny country sandwiched between Sarawak and Sabah.

A Treaty was signed between Brunei and the British in 1847 for the furtherence of commercial relations and the mutual suppression of piracy with an additional clause providing for extraterritorial jurisdiction over British subjects in Brunei. Provisions in this Agreement were modified in 1856 to clarified jurisdictions over British subjects for crimes committed in Brunei. In 1872, the Sultan of Sulok handed over all trading matters in Sabah to William Cowie, but conflict between the western powers led Alfred Dent to gain control and to establish the North Borneo Company in 1882. In 1888 North Borneo became a British protectorate and Brunei became a British protected State.

In 1906 Brunei accepted the First British Resident, a representative of the British Government, who was to advise on all matters except those concerning customs and religion.

A BRIEF HISTORY OF BRUNEI

Between 1906 and 1941 a new form of Government emerged to include a State Council. Oil was discovered in Seria and went into commercial production in 1929, but it was not actively developed because of economic recession in England and many parts of the world. Production was further interrupted by the war and did not fully resume until after the war.

During the second World War, the Japanese occupied Brunei for $3\frac{1}{2}$ years.

After the war, the social and economic development of Brunei slowly returned to normal. However, dynamic progress was witnessed in the seventeen years Sultan Sir Omar Ali Saifuddin, the 28th Sultan of Brunei was on the throne. Under his initiative and leadership, Brunei progressed into the modern world in the economic, social and political fields.

Emphasis was laid on an extensive infrastructure for the State. Secondary Schools were built in the towns and a net work of Primary Schools for the rural areas. A trunk road and branch roads were completed and social services were improved. A new form of Government materialized from the Brunei Constitution of 1959.

It was unfortunate that this aspired progress was marred and interrupted briefly by an irresponsible albeit abortive rebellion in December, 1962. Because of its lack of popularity, the rebellion was swiftly suppressed and it was not long before the State regained its normal pace of progress.

A BRIEF HISTORY OF BRUNEI

At the beginning of 1966 Brunei decided to introduce its own currency at the same time as Malaysia and Singapore in place of the Straits Dollar, which had previously been the common currency in all three States.

On 14th October, 1967 the Sultan of Brunei, His Highness Sir Omar Ali Saifuddin, after seventeen years of benevolent and progressive rule, on his own free will, abdicated and was succeeded by his son, the then Crown Prince. Under the Brunei tradition, the former His Highness became Duli Yang Teramat Mulia Paduka Seri Begawan Sultan Sir Muda Omar Ali Saifuddin. The new Sultan, the 29th of his line, took the name of His Highness Sultan Hassanal Bolkiah Mu'izzaddin Waddaulah. On the accession to the Throne, His Highness pledged to continue to work for the peace and prosperity of his subjects and the country, pioneered by his father, the former Sultan.

His Highness's Coronation took place in the new magnificent Lapau on August 1, 1968 and was attended by many foreign dignitaries.

Under His Highness's helmsmanship Brunei is devoting a share of its very considerable oil revenue to building up its economic and social infrastructure. The construction of the international airport (whose 12,500 foot runway will make it the largest in the Far East), the deep water port, the sewerage system, among others, are progressing rapidly to cater for the needs of developing State. The first oil strike by shell on its 1,470 square mile concession 22 miles off the Brunei coast will stimulate activity in more remote areas such as the Temburong District.

A BRIEF HISTORY OF BRUNEI

Prolonged negotiation on Brunei's constitutional future and on its relationship to the United Kingdom took place in London during September and October, 1968. The talks were attended, among others, by the new Sultan, his younger brother and his father, the former Sultan. Agreement in Principle has been reached in 1970 over Britain's defence commitment to Brunei. On 23rd November, 1971, the Agreement was amended. In this amended Agreement Her Majesty continues to be responsible for the External Affairs of the State and that, subject to consultation, provision for the defence and Security of the State should be a task to be shared between Her Majesty and His Highness and that the State enjoys full internal Self-government.

In 1970 Brunei has resurrected its rightful claim to the Limbang District, an area of approximately 1,000 square miles, which was grabbed by the Second Rajah in 1890, and now forms part of Sarawak's Fifth Division. The claim was made through proper channels seven years ago at the time Brunei refused to join Malaysia and this is the first time the claim has been made public. The public announcement was made by the Seri Begawan Sultan on September 29, 1970 and said "Brunei and Limbang are not separated because Limbang belongs to Brunei. "He urged topographers not to draw boundaries between Brunei and Limbang as the two were in one and the same territory.

On October 4, 1970 the state capital, Brunei Town, was renamed Bandar Seri Begawan, to honour the Seri Begawan Sultan, Sir Muda Omar Ali Saifuddin, the Sultan's father. The official renaming ceremony took place on the town padang.

CHAPTER 13

CONSTITUTION AND ADMINISTRATION.

The Brunei Constitution of September, 1959 cities Brunei as protected State in which the State's external affairs, defence and security are the responsibilities of the United Kingdom. Her Majesty the Queen's Government is represented by a High Commissioner to Brunei. The High Commissioner is to advise the State Government on all matters of the State except on other matters relating to the Muslim religion and the customs of the Malaya as practised in the State.

Considering it appropriate that the existing close and special relationship between the United Kingdom and the State of Brunei, Darul-Salam, on 23rd November, 1971 the Agreement was amended so as to reflect developments that have taken place since 1959. In this amended Agreement Her Majesty continues to be responsible for the external affairs of the State, and that, subject to consultation, provision for the defence and security of the State should be a task to be shared between Her Majesty and His Highness, and that the State enjoys full internal self-government.

The same Constitution provides His Highness the Sultan with supreme executive authority in the State. He is to be assisted and advised by five constituted councils; the Religious Council, the Privy Council, the Council of Ministers, the Legislative Council and the Council of Succession.

The Religious Council : In his capacity as the head of the Islamic Faith, the Sultan is advised in all Islamic matters by the Religious Council. Its members are appointed by the Sultan himself, and the Chairman or President is present the State Religious Affairs Officer.

CONSTITUTION AND ADMINISTRATION

The Privy Council : The Sultan shall preside over this Council. The main function of the Council is to advise the Sultan in matters concerning the Royal prerogative of mercy, on the amendment or revocation of any of the provision of the Constitution, and on the appointments to Malay Customary ranks, titles, honours and dignitaries. Its membership consists of the Regents (if a Council of Regency has been appointed), six ex-officio, the High Commissioner and any other persons as the Sultan may appoint.

The Council of Ministers: The Council of Ministers considers all the executive matters and those which are to be tabled at the Legislative Council meetings. It has eleven members, namely six ex-officio, the High Commissioner and four unofficial members who are also the appointed members of the Legislative Council. His Highness the Sultan shall preside over the Council.

The Legislative Council : This Council is presided over by a speaker appointed by the Sultan either from among the members of the Council or from among persons who are not members. The Council introduces Bill, passes laws, exercises financial controls and scrutinises government policies and their implementations.

The Council of Succession : Subject to the Constitution of the State, this Council shall determine the succession to the Throne should the need arise. Its members are the "Cheterias", four "Mentris", all Malay members of the Executive Council and six members of the Religious Council.

ADMINISTRATION

The Menteri Besar is responsible to the Sultan for the exercise in the State of all Executive authority. He is assisted by three senior key officials, the State Secretary, the Attorney General and the State Financial Officer.

The State Secretary is the principal officer in charge of administrative affairs. The Attorney-General heads the Criminal Prosecution Department and the State Financial Officer is the principal officer responsible for the state financial matters.

Each individual department is headed by the respective head who must consult the State Secretary on any proposed departmental policies before implementing them. The four District Officers are also responsible to the State Secretary.

State Departments have their own branches in districts and these branches are responsible to their immediate departmental heads. In districts where there are no departmental branches then the respective District Officers will act as such.

JUDICIARY

The Judiciary is a separate body and is responsible for the judicial powers of His Highness the Sultan. His Highness may refer any question involving the meaning and interpretation of any the provisions of this constitution to the Interpretation Tribunal established accordingly.

CONSTITUTION AND ADMINISTRATION

THE PUBLIC SERVICE

The Public Service Commission provides the staff for all government departments and other units of the administration except for the armed forces, the police force and the Prison service for the State. The Commission consists of a Chairman and four other persons appointed by the Sultan. Members of the Commission are appointed for a period of three years and at the end of the period they are still eligible for appointment.

CONSTITUTION AND ADMINISTRATION

Members of the Privy Council

Duli Yang Maha Mulia Paduka Seri Baginda Sultan dan Yang Di-Pertuan Sir Muda Hassanah Bolkiah Mu'izzaddin Waddaulah ibni Duli Yang Teramat Mulia Paduka Seri Bagawan Sultan Sir Muda 'Omar 'Ali 'Saifuddin, DK., PSSUB., DPKG., DPKT., PSPNB., PSNB., PSLJ., SPMB., PANB., GCMG., DK. (Kalantan), DK (Johor), Sultan dan Yang Dipertuan Negeri Brunei Darus Salam.

1. Duli Yang Teramat Mulia Paduka Seri Begawan Sultan Sir Muda 'Omar 'Ali Saifuddin ibni Al-Marhum Sultan Muhammad Jamalul 'Alam, DK., PSSUB., GCVO., KCMG., PHBS., Brunei.
2. Yang Teramat Mulia Seri Paduka Duli Pengiran Perdana Wazir Sahibol Himmah Wal-Waqar, Pengiran Muda Mohamed Bolkiah ibni Duli Yang Teramat Mulia Paduka Seri Begawan Sultan Sir Muda 'Omar 'Ali Saifuddin, DK., CVO., PHBS., Brunei,
3. Yang Teramat Mulia Seri Paduka Duli Pengiran Bendahara Seri Maharaja Permai Suara, Pengiran Muda Haji Hashim ibni Al-Marhum Duli Pengiran Bendahara, Pengiran Anak 'Abdul Rahman, DK., SPMB., POAS., Brunei.
4. Yang Teramat Mulia Seri Paduka Duli Pengiran Di-Gadong Sahibol Mal, Pengiran Anak Haji Khamis ibni Al-Marhum Kabawah Duli Sultan Hashim, DK., DPMB., POAS., Brunei.

CONSTITUTION AND ADMINISTRATION

5. Yang Teramat Mulia Seri Paduka Duli Pengiran Pemancha Sahibol Rae' Walmashuarah, Pengiran Muda Haji Mohamed 'Alam ibni Al-Marhum Duli Pengiran Bendahara, Pengiran Anak 'Abdul Rahman, DK., SPMB., DSNB., OBE., POAS., PHBS., Brunei.
6. Yang Teramat Mulia Seri Paduka Duli Pengiran Temenggong Sahibol Bahar, Pengiran Haji Mohamed bin Pengiran Piut, DK., SPMB., DSNB., PANB., POAS., Brunei.
7. Yang Teramat Berhormat Pehin Orang Kaya Laila Setia Bakti Diraja, Dato Laila Utama Awang Isa bin Pehin Dato Perdana Menteri Awang Haji Ibrahim, DK., SPMB., DSNB., CVO., OBE., PHBS., Penasehat Umum Kapada Kebawah Duli Yang Maha Mulia Paduka Seri Baginda Sultan dan Yang Di-Pertuan Negeri Brunei, Brunei.
8. Yang Amat Mulia Pengiran Dipa Negara, Pengiran Mominbin Pengiran Haji Ismail, DK., DSNB., DPMB., MVO., PHBS., POAS., Pemangku Mentri Besar, Brunei.
9. Yang Amat Mulia Pengiran Maharaja Anakda, Pengiran Haji Ahmad ibni Al-Marhum Duli Pengiran Bendahara, Pengiran Anak Haji Mohd. Yassin, DPMB., Brunei.
10. Yang Berhormat Pehin Orang Kaya Shahbandar, Dato Setia Awang Haji Ahmad bin Daud, DSNB., MBE., POAS., Brunei.
11. Yang Amat Mulia Pengiran Paduka Tuan Sahibol Karib, Pengiran Haji Abu Bakar ibni Al-Marhum Duli

CONSTITUTION AND ADMINISTRATION

Pengiran Pemancha Pengiran Anak Mohd. Saleh ,
DSNB., POAS., Brunei.

12. Yang Amat Mulia Pengiran Jaya Negara, Pengiran Haji Abu Bakar bin Pengiran 'Umar, DK., DSNB., MBE., PHBS., POAS., Brunei.
13. Yang Berhormat Pehin Jawatan Dalam Dato Setia Awang Haji Mohamed Noor bin Pehin Orang Kaya Laksamana Awang Haji 'Abdul Razak, DSNB., POAS., Brunei.
14. Yang Berhormat Pehin Orang Kaya Amar Diraja Dato Seri Utama (Dr.) Awang Haji Mohamed Jamil Al-Sufri bin Begawan Pehin Udana Khatib Awang Haji 'Umar, DK., DSLJ., DPMB., PHBS., POAS., Brunei.
15. Yang Berhormat Pehin Orang Kaya Di-Gadong, Dato Laila Utama Awang Haji Mohamed Yusof bin Pehin Jawatan Dalam Awang Haji Mohamed Hussein, DK., PSNB., DPMB., POAS., Brunei.
16. Yang Berhormat Begawan Pehin Udana Khatib, Dato Seri Paduka Awang Haji 'Umar bin Awang Rendah, SPMB., DSNB., PHBS., Brunei.
17. Yang Berhormat Pehin Orang Kaya Laksamana, Dato Laila Utama Awang Haji 'Abdul Rahman bin Pehin Orang Kaya Shahbandar Awang Haji Mohamed Taha, DK., SPMB., DSSUB., DSLJ., PSB., MVO., POAS., PHBS., Brunei.
18. Yang Berhormat Pehin Jawatan Luar Pekerma Raja, Dato Seri Utama Awang Haji Mohamed Taha bin Pehin Ratna Diraja Awang Hussein, DK., SPMB., DSNB., POAS., Brunei.

CONSTITUTION AND ADMINISTRATION

19. Yang Berhormat Pehin Datu Temenggong Dato Seri Paduka Awang Lim Cheng Choo, SPMB., SNB ., POAS., Brunei.
20. Yang Amat Mulia Pengiran Kerma Negara, Pengiran Anak 'Abdul Wahab bin Pengiran Sabtu Kemaluddin, DSNB., SMB., PHBS., Brunei.
21. Yang Amat Mulia Pengiran Penggawa Laila Bentara Istiadat Diraja Dalam Istana, Pengiran Haji Mokhtar Puteh bin Pengiran Haji Rajid, DK ., DSNB., DPMB., PNB., MVO., PHBS., Brunei.
22. Yang Amat Mulia Pengiran Sanggamara Diraja , Pengiran Anak Chuchu ibni Al-Marhum Pengiran Muda Mohd. Saleh, DK., SLJ., PHBS., Brunei.
23. Yang Amat Mulia Pengiran Maharaja Lela Sahibol Kahar, Pengiran Anak Mohd. Yusof ibni Duli Pengiran Pemancha, Pengiran Muda Haji Mohamed 'Alam, DK., SNB., PHBS., Brunei.
24. Yang Amat Mulia Pengiran Setia Raja, Pengiran Jaya bin Pengiran Haji Rajid, DK., DHPNB., PHBS., Brunei.
25. Yang Amat Mulia Pengiran Setia Jaya, Pengiran Haji 'Abdul Momin bin Pengiran Othman, DK., DSNB., SLJ., CVO., PSB., POAS., PHBS., Brunei.
26. Yang Berhormat Pehin Orang Kaya Ratna Diraja Dato Seri Utama Awang Haji Mohd. Zain bin Haji Serudin, DK., PSSUB., DSLJ., PHBS., Brunei.

CONSTITUTION AND ADMINISTRATION

27. Yang Berhormat Pehin Datu Saudagar Derma Laila, Dato Seri Paduka Awang R.T. Lloyd Dolbey , SPMB., DSNB., DSLJ., POAS., Brunei.
28. Yang Berhormat Pehin Datu Derma Setia, Dato Seri Paduka Awang P.A. Coates, SPMB., DSNB , DSLJ., OBE., Brunei.
29. Yang Amat Mulia Pengiran Shahbandar Sahibol Bandar, Pengiran Anak Haji 'Abdul Aziz bin Pengiran Jaya Negara Pengiran Haji Abu Bakar, DK., PHBS , Brunei.
30. Yang Berhormat Pehin Orang Kaya Laila Kanun Diraja, Dato Laila Utama Awang Idris Talog Davies, DK., SPMB., DSNB., CBE., PHBS., AK (Kelantan) , PJK (Terangganu) , Brunei.
31. Yang Berhormat Pehin Orang Kaya Khazanah Negara Laila Diraja, Dato Laila Utama Awang John Lee , DK., SPMB., DSNB., CBE., PHBS., Brunei.
32. Yang Berhormat Pehin Orang Kaya Tabib Laila Diraja, Dato Seri Paduka Seri Laila Jasa Dr. P. I . Franks, PSLJ., SPMB., DSNB., POAS., PIS (Johor) , Brunei.
33. Yang Amat Mulia Pengiran Perdana Cheteria Laila Diraja Sahibon Nabalang, Pengiran Haji Damit bin Pengiran Metussin, DK., DSNB., DPMB., SLJ., PJB., PHBS., Brunei.

CONSTITUTION AND ADMINISTRATION

34. Yang Berhormat Pehin Khatib Dato Seri Utama Awang Haji Metali bin Matyassin, DK., DSSUB., DPMB., POAS., Brunei.
35. Yang Berhormat Pehin Orang Kaya Datu Patinggi Maha Kurnia Diraja, Dato Seri Utama Sir Dennis Charles White, DK., KBE., CMG., OSS.

The Council of Ministers.

Duli Yang Maha Mulia Paduka Seri Baginda Sultan dan Yang Di-Pertuan Sir Muda Hassanah Bolkiah Mu'izzaddin Waddaulah ibni Duli Yang Teramat Mulia Paduka Seri Begawan Sultan Sir Muda 'Omar 'Ali Saifuddin Sa'adul Khairi Waddin, DK., PSSUB., DPKG., DPKT., PSPNB., PSNB., PSLJ., SPMB., PANB., GCMG., DK (Kelantan) DK (Johor), Sultan dan Yang Di-Pertuan Negeri Brunei.

1. Duli Yang Teramat Mulia Paduka Seri Begawan Sultan Sir Muda 'Omar 'Ali Saifuddin Sa'adul Khairi Waddin ibni Al-Marhum Sultan Muhammad Jamalul 'Alam, DK., GCVO., KCMG., PSSUB., PHBS., Brunei.
2. Yang Teramat Mulia Seri Paduka Duli Pengiran Perdana Wazir Sahibol Himmah Wal-Waqar, Pengiran Muda Mohamed Bolkiah ibni Duli Yang Teramat Mulia Paduka Seri Begawan Sultan Sir Muda 'Omar 'Ali Saifuddin Sa'adul Khairi Waddin, DK., SPMJ., (Johor), CVO., PHBS., Brunei.
3. Yang Teramat Berhormat Pehin Orang Kaya Laila Setia Bakti Di-Raja, Dato Laila Utama Awang Isa bin Pehin Datu Perdana Menteri Dato Laila Utama Awang Haji Ibrahim, DK., SPMB., DSNB., CVO., OBE., PHBS., Penasehat Umum Kebawah Duli Yang Maha Mulia Paduka Seri Baginda Sultan dan Yang Di-Pertuan Negeri Brunei, Brunei.

CONSTITUTION AND ADMINISTRATION

4. Yang Amat Mulia Pengiran Dipa Negara, Pengiran Momin bin Pengiran Haji Ismail, DK., DSNB., MVO., PHBS., POAS., Pemangku Mentri Besar, Brunei.
5. Yang Berhormat Dato Paduka Awang Matnor McAfee, DPMB., POAS., Pemangku Setiausaha Kerajaan, Brunei.
6. Yang Berhormat Pehin Orang Kaya Laila Kanun Di-Raja, Dato Laila Utama Awang Idris Talog Davies, DK., SPMB., DSNB., CBE., PHBS., AK (Kelantan), PJK. (Trengganu), Peguam Negara, Brunei.
7. Yang Berhormat Pehin Orang Kaya Khazanah Negara Laila Di-Raja Dato Laila Utama Awang John Lee, DK., SPMB., SDNB., CBE., PHBS., Pegawai Kewangan Negara, Brunei.
8. Yang Berhormat Pehin Orang Kaya Ratna Di-Raja, Dato Seri Utama Awang Haji Mohd. Zain bin Haji Serudin, DK., PSSUB., DSLJ., PHBS., Pemangku Penasehat Ugama, Brunei.
9. Yang Berhormat Orang Kaya Pekerma Dewa, Awang Lukan bin Uking, POAS., Brunei.
10. Yang Berhormat Awang Haji Sapawi bin Metassim, Kuala Belait. .
11. Yang Berhormat Dato Setia Awang Mohd. Taib bin Awang Haji Besar, DSNB., DPMB., MBE., PHBS., Brunei.

12. Yang Berhormat Pehin Jawatan Luar Pekerma Raja,
Dato Seri Utama Awang Haji Mohamed Taha bin
Pehin Ratna Di-Raja Awang Hussein, DK., SPMB.,
DSNB., POAS., Brunei.

UNIVERSITY OF MICHIGAN



3 9015 05448 3071

